THE ARCHITECT & BUILDING NEWS

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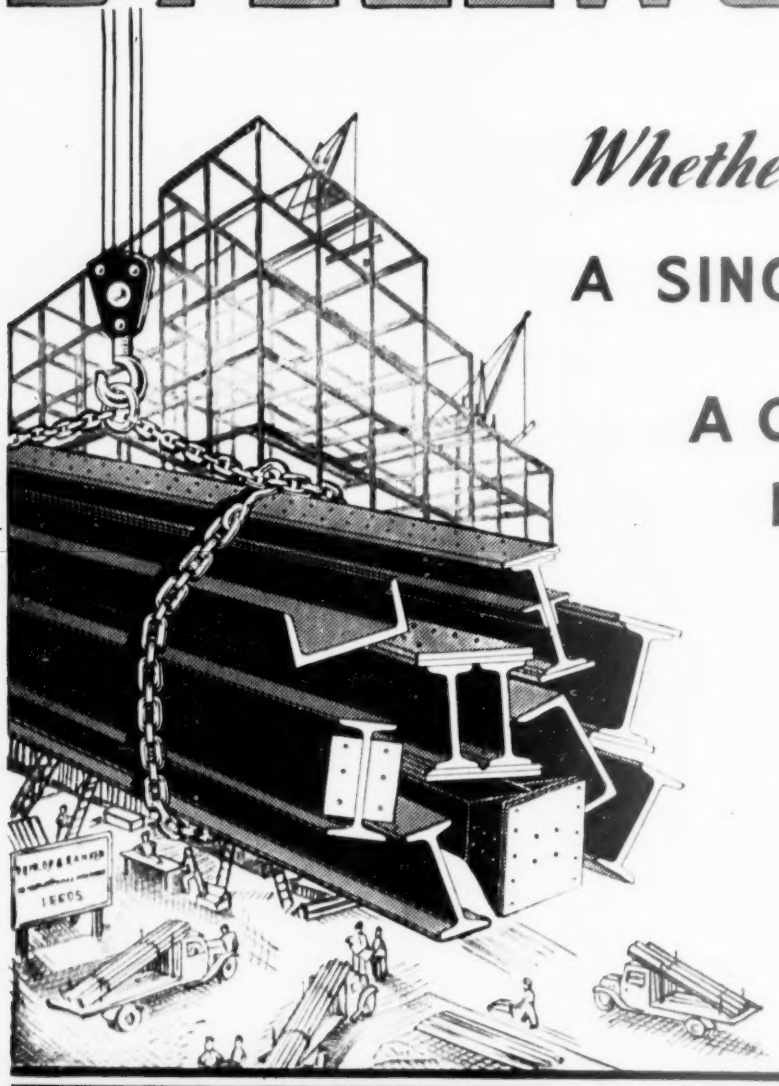
FEBRUARY 12, 1953 · VOL. 203 · NO. 7 · ONE SHILLING WEEKLY

STEELWORK



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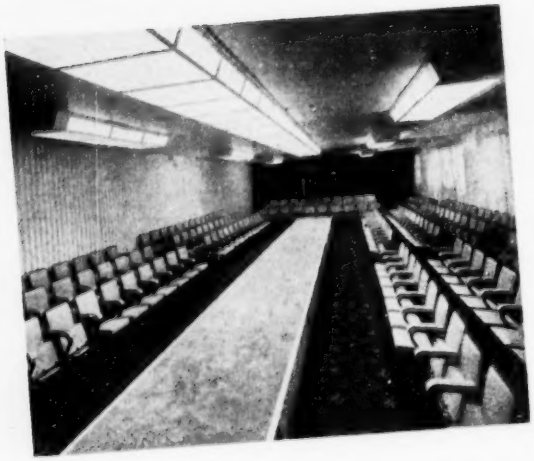

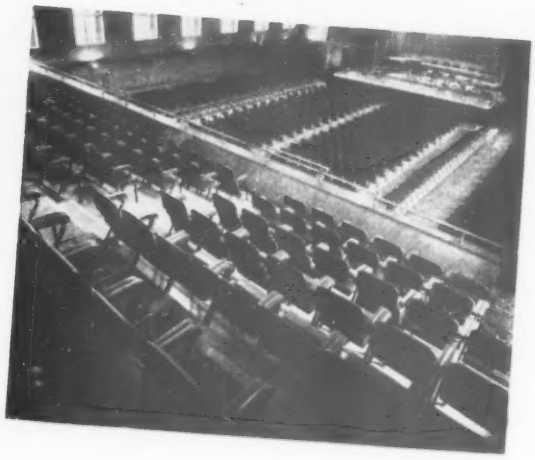

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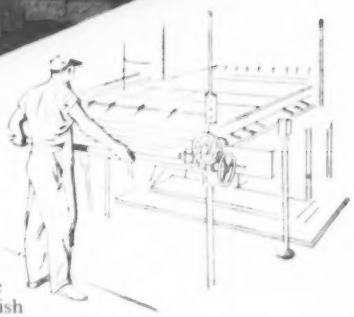

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All Saints' Church, Darlaston

Architects: Lavender, Twentyman & Percy, F./A.R.I.B.A.

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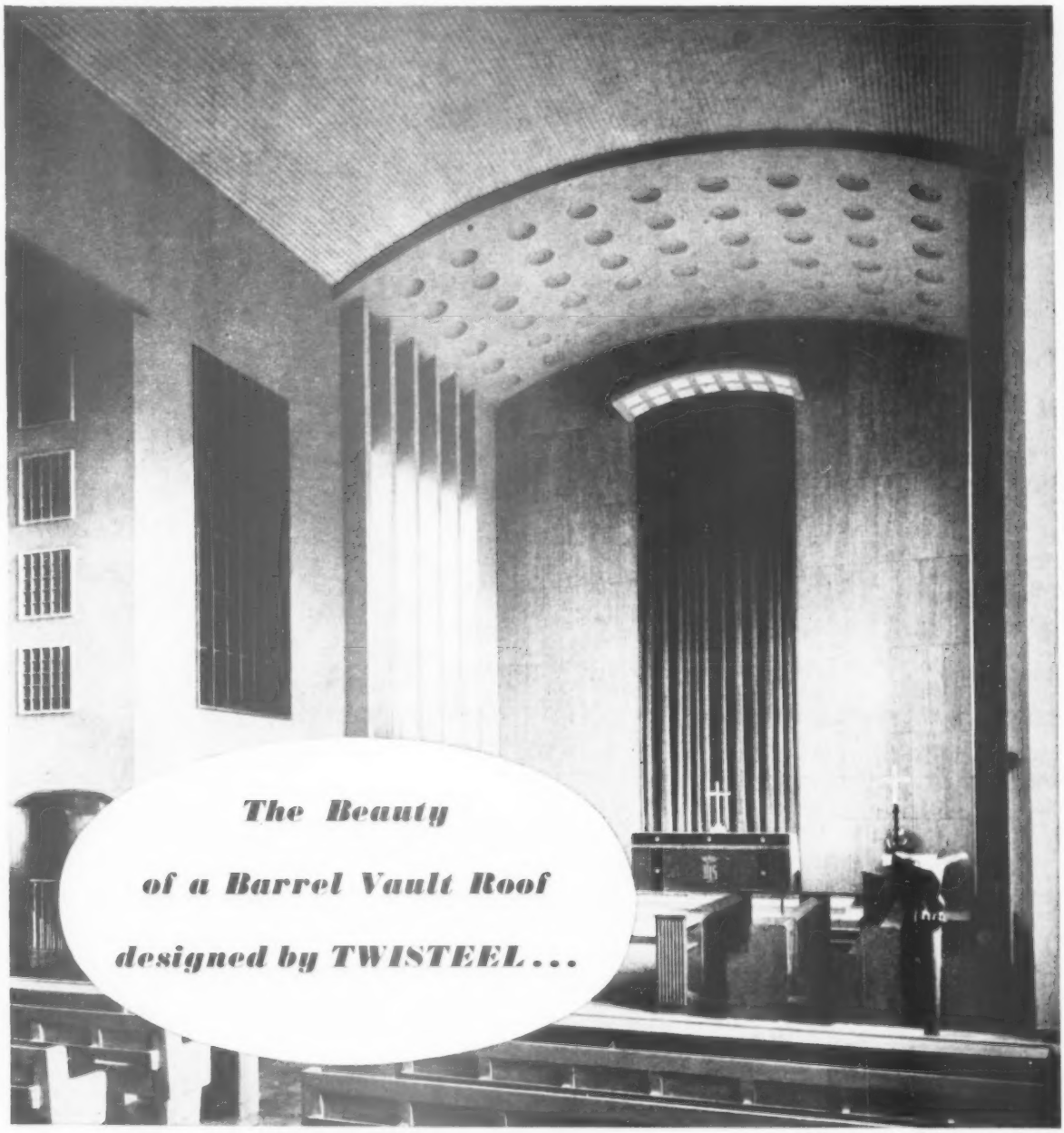

Architects: Lavender, Twentyman and Percy
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. . . is that it can be decorated as required by the architect. Here is an example more than purely utilitarian — All Saints' Church, Darlaston, where the barrel vault form blends admirably with the modern design. This beautiful church roof, (118′ x 28′ and 2½″ thick) demonstrates our work on shell structures. The great experience of our engineers is always at your service.

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Pollards Hill Estate

for

MITCHAM BOROUGH COUNCIL

(Illustrated in this issue)

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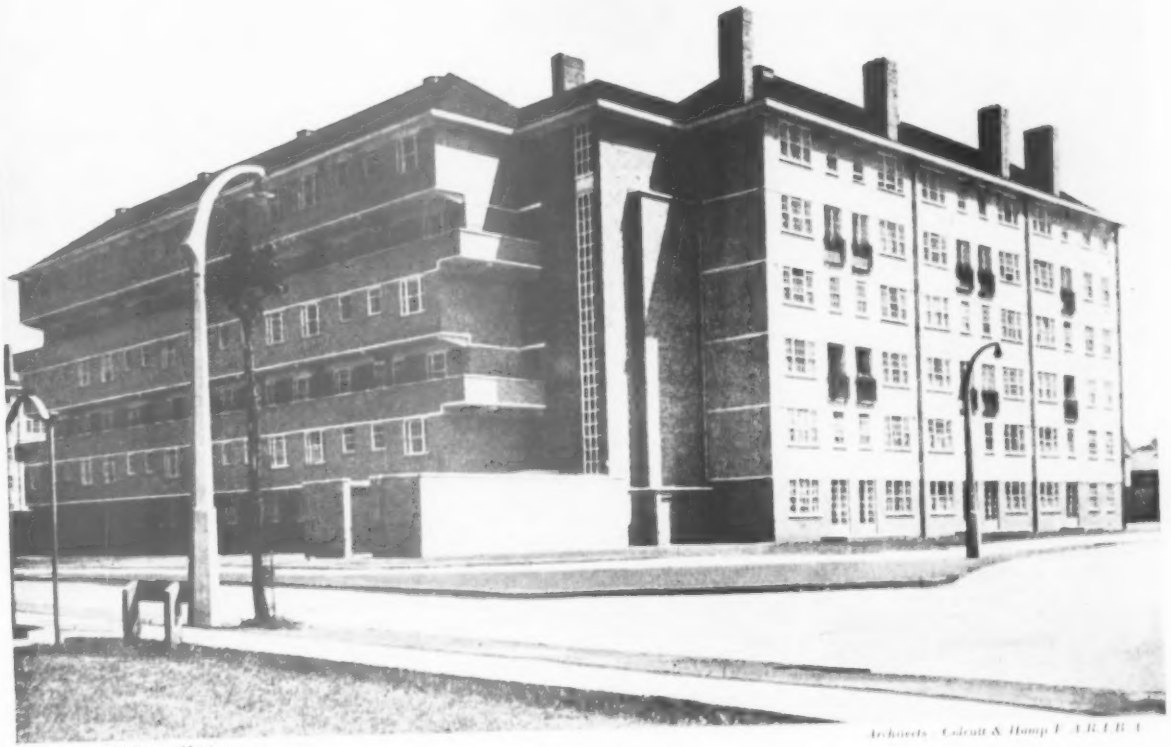

Pollards Hill Estate, Mitcham — *Architects: Culcutt & Hamp F.A.R.I.B.A.*

We have recently completed the building of seven blocks of multi-storey flats for the Mitcham Borough Council. These blocks — three of 4 storeys and four of 6 storeys comprising 324 dwellings — form the centre of the development lay-out of the Pollards Hill Estate, Mitcham. Of traditional brick construction with concrete suspended floors, the three 4 storey blocks were all built within twelve months . . . and the four 6 storey blocks — contructed in reinforced concrete framing with brick external cladding — were completed eighteen months later . . . All well up to Wates standard of speedy erection . . . and three months ahead of schedule.

See Editorial Feature Pages 199–201

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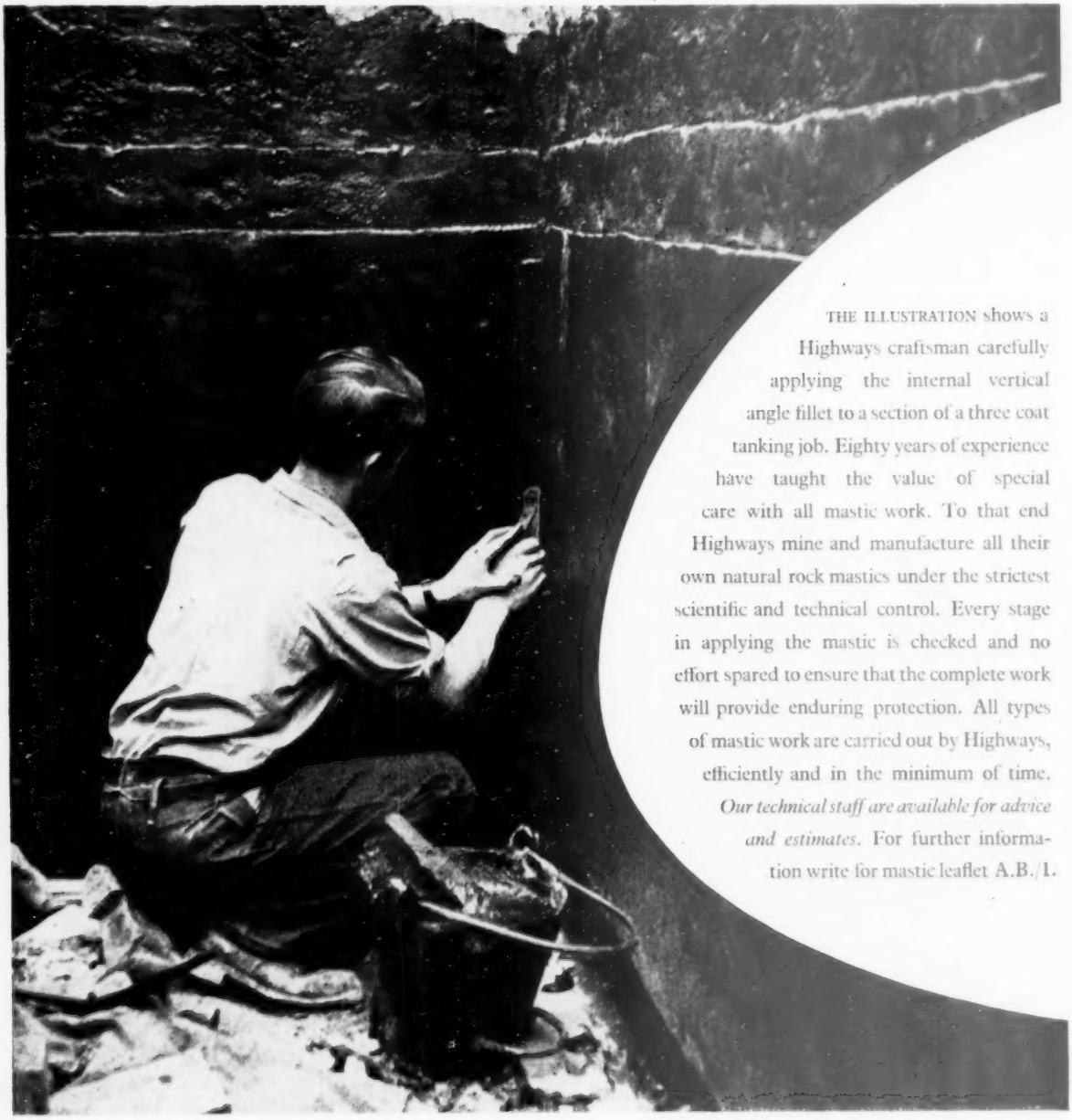

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The illustration shows the use of 24 in. × 12 in. Blue Colour "POILITE" Asbestos-Cement Slates for the roofs of a group of houses on the L.C.C. Lansbury Estate – Poplar, and emphasizes the economical "low pitch" construction employed.

Architects: Messrs. Bridgewater & Shepheard, F/A.R.I.B.A. under the direction of Cyril H. Walker, C.B.E., M.C., F.R.I.B.A., F.R.I.C.S., M.I.MUN.E., Director of Housing and Valuer. Overall Reconstruction Plan prepared by Robert H. Matthew, C.B.E., A.R.I.B.A., Architect to the Council.

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P.4

Information

Gas in the design for living

The new enlarged gas and coke exhibit at the London Building Centre is now open. In it visitors will find the latest information on the use of gas and coke, mainly for domestic, but also for commercial purposes. Also shown are approved methods of gas and coke installation in contemporary housing. There is a sectional display of the latest gas and coke equipment, together with examples of commercial appliances. A technical representative is available to answer queries and there is a comprehensive reference library. Visits from individuals or parties are welcomed, (prior notice of a visit from an organised party will be appreciated).

Exhibit designed by Montague Reed, M.S.I.A. Contractors: David Esdaile & Co., Ltd.

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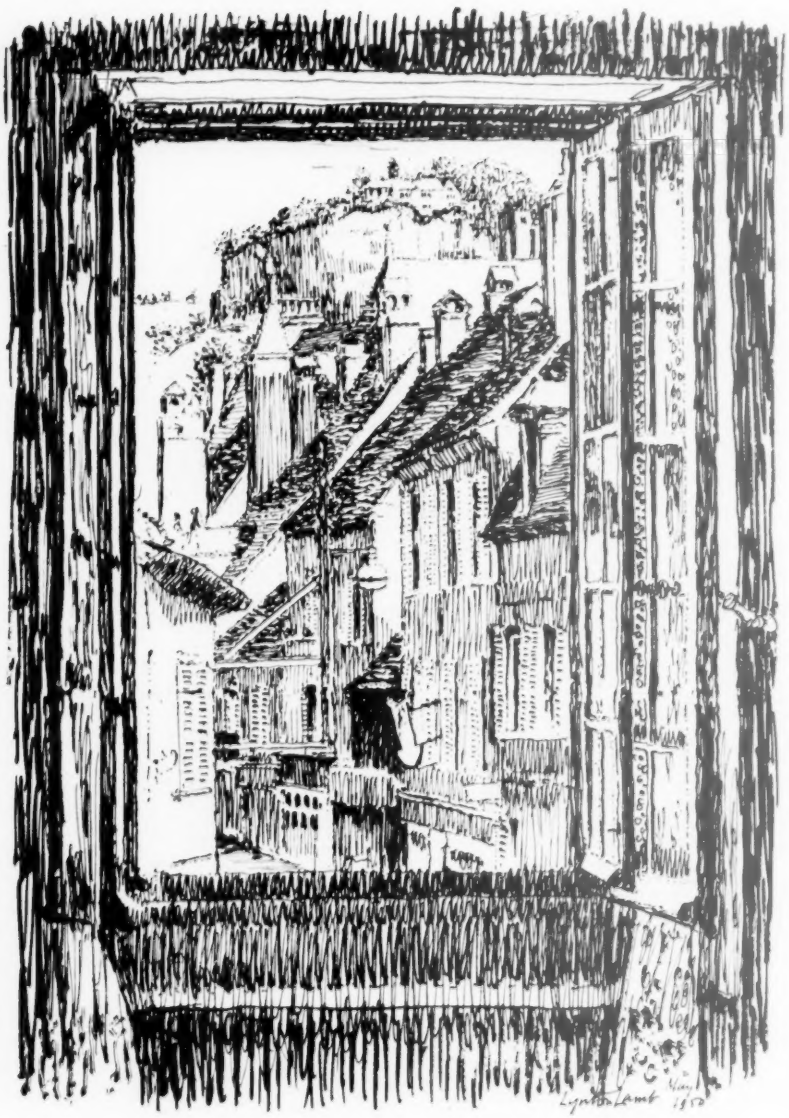

Ornans from the Hôtel du Jura

BY LYNTON LAMB

Lynton Lamb's drawing was done from a window of the Hôtel du Jura at Ornans. It evokes memories of a drowsy afternoon in this little French town, when apart from an occasional strident note from the klaxon of the inevitable 'Quatre Chevaux' or the bark of a dog, all was quiet as the town slept off the effects of the wines of the Moselle and the Jura.

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Vol. 203 No. 7

THE ARCHITECT & BUILDING NEWS

February 12, 1953

The "Architect and Building News" incorporates the "Architect," founded in 1869, and the "Building News," founded in 1854. The annual subscription, inland and overseas, is £2 15s. 0d. post paid: U.S.A. and Canada $9.00

Published by ILIFFE & SONS LTD., DORSET HOUSE, STAMFORD STREET, LONDON, S.E.1
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BUILDING COSTS AND THE NATION

THE cost of building, whether of houses or other constructions, continues to attract attention and criticism. Building policy, reflecting public statements by many different people and of many different values and usefulness, seems to be centring more and more about isolated methods of reducing costs. Coupled with this aim, and, in fact, a major factor of the consideration, is higher productivity. For, it is argued, greater output by all in the industry means more buildings built at a cheaper cost. This latter statement is unproven; it is assumed to be correct, but the hypothesis upon which it is based has never been fully tested in this country. The Productivity Team said that output in the U.S.A. was higher than in this country, mechanization was greater, and so on; but it is also true that the buildings cost a good deal more. The present cost of a three-bedroom house in the States is at least $15,000, which, in spite of much rationalization, standardization and high-powered organization, to which we are continually referred to that country, is, at pre-war rates, about £3,000, and at present rates about £5,000.

A period of quiet cogitation, away from the public statements and any sort of bias towards any particular section of the building industry, leads to an uneasy conclusion that, even if the industry was itself subjected to overhaul and reorganization, mechanization more intensively introduced and human productivity made greater by various innovations, the cost of building would not be reduced materially.

The present level of building costs is a product of post-war economic conditions of all kinds and is not confined to factors contained rigidly within the limitations of a single industry. All industries and all social and welfare administration in this country are under the general conditions of inflation, high taxation, influence of exports, gold reserves and the balance of payments problems.

To attempt to solve the difficulties of the building industry and to reduce its prices for its products in complete isolation from the general national and international situation is to indulge in an unscientific anomaly. This is not to say that there are not many things to be done within this major industry by builders and professional sides alike, to improve the present inheritances from what must now be regarded largely as a traditional past. We have "pointed" many of these "local" issues in these columns on many occasions. What is just as important is the recognition that whatever is done within the industry must ultimately be related to the whole outside tempo of the national output and to the inadequacies and omissions which produce the present level of this total output.

Let us examine one or two factors in relation to building industry on the one hand and the national economy on the other. We are told by different authorities that this year there will be plenty of bricks; alternatively that local facing-bricks are as difficult as ever and that many smaller brickfields are still out of action as a result of the war or immediate post-war difficulties. These two points of view, leaving out for the moment other factors that enter into the efficient production and distribution of bricks in this country, can only mean that at present production of bricks is too concentrated and too unevenly distributed in relation to consuming areas for the establishment of maximum efficiency and minimum costs. Incidentally, also, the building industry is too dependent on seasonal activities in the brickfields and suffers too much from the lack of planned reserve-stacks to be certain of an avoidance of shortages at any given moment. Here, then, in a single material we can see something of an epitome of cost-increases. Many of the factors, particularly that of transport, are out of the hands of the building industry alone, or not entirely in those of the brick

manufacturers acting in concert; it is rather a concern of the wider field of regional and even national planning.

Transport and the high cost of transport are certainly large factors controlling the cost of building. It had been stated that the cost of transport for materials, components and waste products amount to about one-seventh of the cost of the average three-bedroom house. If this is true, then house-building contributes a goodly share of national revenue through the mediums of the petrol tax and other vehicle imposts. But this is not the full story. The road system of this country is thoroughly out of date and not suited to transport demands; the railways are battling with the same problems from the past and the canals are scarcely used at all. Unco-ordinated transport facilities and, in particular, inadequate roadways cost the whole country an immense sum every year. One source suggests that £60 M. could be saved every year by a modernization of the trunk roads only. Again here is a factor that, although essential in the consideration of building costs, is outside the industry's control and is really within national policy and planning.

These illustrations of the general argument could be extended, but space and lack of immediate statistical information call a halt.

The basic questions arising must be asked: what can be done in these wider fields to reduce the incidence of their effects on the building industry? National policy and planning are matters for central government, central research and central solutions; can the builders be asked to reduce or to forgo reasonable profits because they are within a mesh of external unpropitious factors? Can the operatives be persuaded to increase their productivity or to reduce their wages in the face of problems which even they see are outside the industry and its control? The architects and the surveyors are probably in their professional neutrality least able to influence the situation, even if they see it and wish to; or can they?

A solution to the problem of adding a modern extension to an old school on a strictly limited site is illustrated in this issue in a proposal for the Samuel Pepys School, Deptford, designed by Gollins, Melvin, Ward & Partners. This view shows the Link between the old and the new buildings.

The ketch "Aries" (see below)

EVENTS AND COMMENTS

FIREPLACE INTO DOUBLE BED

My pictures show external and indoor views of the auxiliary ketch "Aries," recently completed by Camper and Nicholsons for an American yachtsman. She has a displacement of 124 tons and is over 90 feet long. She is the largest auxiliary yacht to be built in this country since the war and is luxuriously equipped. Externally at any rate "Aries" is a handsome girl. The electrical system is most elaborate and the ship can take current either from the main or from its two 20 kW generators and battery. The equipment includes radio telephone, radar, radiogram, cinema, dictaphones, air conditioning, refrigerator with deep freeze, two electric cookers and a washing machine with a spin drier. However, the thing that interests me most is a fireplace "with a conventional mantelpiece and surround" in the owner's stateroom which can be converted at will into a double bed with fitted bedside lights. They have certainly got something there and I am glad to see that they have arranged for some switches to ensure that the fire is only on at the appropriate time.

TIME AND LIFE BUILDING

The architectural occasion of the week was undoubtedly the private view of the *Time* and *Life* Building in Bond Street. This large block built at the junction of Bruton Street and Bond Street was designed by Michael Rosenauer with Sir Hugh Casson and Misha Black as co-ordinators for the interior design. A full description of the building will appear in a future issue and it is only for me to comment on some of the main points. Let me say first that I think that Mr. Rosenauer gave his interior designers a flying start by supplying them with a very well planned and detailed building. His part in the proceedings is in some danger of being obscured by the wealth of talent that has been employed on the interior. The results would not have been half so good had it not been for Mr. Rosenauer's architecture.

The building is important for it is the first post-war office block to be built without licensing restriction. The directors of *Time* and *Life* appear to have spared no expense and it is indeed interesting to see the result. The decoration of the building is the work of some of our best contemporary designers and artists; among them there are many South Bank names. The rooms and areas which were entrusted to one architect or designer are very good indeed. Leonard Manasseh's directors' dining room and H. T. Cadbury Brown's conference room are excellent. The offices of the chief executives come next on my list. The general planning, layout and furnishing of the main offices make them, I imagine, very pleasant to work in, particularly as Mr. Rosenauer has, by ingenious planning, arranged for daylighting on all four sides of the building. I liked, too, the cafeteria with its wide variety of types of seating and its roof top views. It is equipped not only with a hot-plate but also with a snow covered cold-plate. It is not so easy to give unstinted praise to the main reception room although it is packed with elegant and beautifully designed things. There is, I think, far too much going on to produce a really satisfactory result there. One of the many blurbs handed out at the private view begins by saying that "it was desired that the general atmosphere of the reception area should be as far as possible British in feeling." To my mind it does not do so but provides that atmosphere of high pressure American culture which one associates with the art pages of *Time* or *Life* and it may therefore be precisely what the clients really wanted. The ceiling, white and ribbed in rectangular shapes, is used as a background for a black leather **testa** on which is mounted a series of flush electric light fittings; the black leather is beautifully patterned with brass nails and stars. The design of the whole thing is exquisite. Nearby there is a wall of Ashburton marble rich as plum pudding. The whole of one end wall is of

sumptuous brown leather covered with most beautifully tooled lines which are said to represent the world's lines of communications. No matter what the wall represents it is most highly decorative. One of the long walls of the room is glazed by day and curtained by night. The curtains have for pattern a vast colonnade of classical pillars, a fine design printed on a cloth which is scarcely worthy of it. My eyes by this time were searching for something unpatterned to rest on but found no relief for the fourth wall of splendidly polished Paroba veneer which carries a richly designed clock incorporating the American eagle and the British lion. I could not help feeling that there was a certain amount of justification for showing the eagle on top. As if all this was not enough to give the impression of unparalleled richness, the carpet which surely could have relied on its deep pile for luxurious effect, has an ornate floral border. The full effect of this could not be appreciated as it was covered with people.

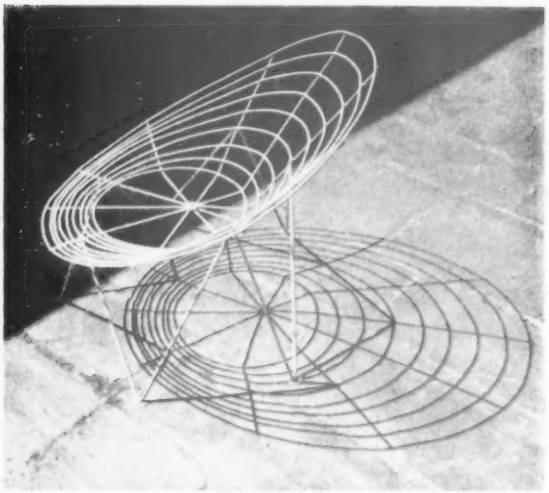
So starved are we in this country of good-quality building and high-class finish and furnishing that our only yardstick with which to measure its success is contained in the glossy pages of *Time* and *Life's* own Architectural Forum. So used are our stomachs to small meals that a perfectly normal French dinner may easily incapacitate us; it is the same with our architectural outlook. In the United States sumptuous office buildings are put up every other day; here there has been no office building worth a fig since the war. The interior, though completely international in style, will set a new standard for commercial building in this country; that is to say, if any British firm is ever permitted or is in a position to spend anything like the amount of money that *Time* and *Life* have spent.

THE LATEST FOR THE KITCHEN

The electro-sonic washing machine has made its appearance in America. It appears to consist of a large metal drum with a removable central heart which sends out sound waves of too high a frequency to be detected by the human ear. The dirt is, as it were, charmed from the clothes. This is excellent so long as the thing does not work on the same frequency as those noiseless dog whistles.

A firm which should know better has produced a monstrous Coronation teapot. The body is made in the semblance of a crown. The spout, handle and lid somewhat spoil the illusion. In the advertisement the object is shown sitting on a tasselled velvet cushion. No marks for the designer or manufacturer of this monstrosity.

ABNER



A prototype chair in ¼" steel rod stove enamelled, designed by Dennis Lennon. The photograph, by George Mansell, is exhibited at the Architectural Association's Annual Exhibition of Photography by Members, which is open until Friday, February 20.

NEWS OF THE WEEK

The Modular Society

The inaugural public meeting was held on Friday, January 23, at the Royal Society of Arts. Mr. Alfred C. Bossom took the chair, supported by Mr. E. Munro Runtz, Chairman of the R.S.A. Council, and by Mr. M. Hartland Thomas. Mr. Bossom opened the proceedings and referred to the present excessive cost of building and to the recommendation in the report of the Building Mission to America in 1944 that modular co-ordination should be introduced.

A letter was read from Mr. H. A. R. Binney, Director of the British Standards Institution, welcoming the new society and expressing confidence that it would work in harmony with the B.S.I. where study of modular co-ordination was already under way.

A message was received from Mr. Howard Robertson, P.R.I.B.A., that he was authorized by the Council of the Royal Institute of British Architects to join the Modular Society.

Mr. Hartland Thomas gave the aims of the society, conditions of membership and the names of the provisional committee and the nucleus of members who had already joined. The meeting was then opened for discussion, from which the following points were noted:

(1) The provisional committee should include those who had done the initial research.

(2) Meetings should be held in the evening.

(3) Trade associations might nominate one member to join for contact.

(4) One speaker considered that building components should be studied before discussing dimensional co-ordination.

(5) There should be a student's rate of subscription.

Of the 200 people present, 111 filled in membership forms.

The meeting ended with a vote of thanks to the Royal Society of Arts, which was briefly responded to by Mr. Munro Runtz.

A provisional committee has been convened by invitation and has held its first meeting on Thursday, January 29. It will report to a general meeting of the society with proposals for its constitution, finance and organization, when elections will be held. In advance of these arrangements the committee plans to make a start with the following programme:

A general meeting, or series of meetings, for debate upon the adoption by the society of a module or group of related modules, vertical as well as horizontal, for "wet and heavy" construction as well as for "light and dry."

Study of the thickness problem, leading if possible to an agreement on a series of wall and floor finished thicknesses, related to the module.

A symposium on tolerances, so as to

begin to build up a body of common experience.

Study for the co-ordination of jointing details.

Library and information service.

Planning Consultant to Visit Middle East

Mr. Anthony Minoprio, F.R.I.B.A., A.M.T.P.I., who is visiting Kuwait to advise the Sheikh on town planning, will break his outward journey to lecture for the British Council in Lebanon, Syria and Iraq and to meet architects and town planners, between February 9 and 17.

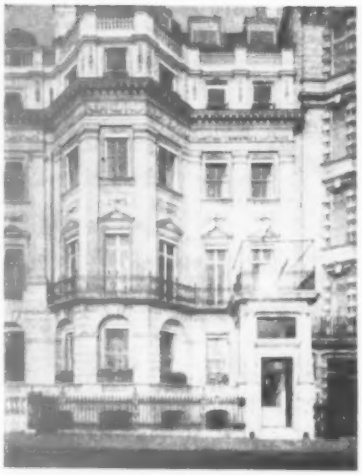
In Beirut and Baghdad he will lecture on "Recent town planning in Britain and contemporary British architecture." He will visit New Damascus and meet Syrian architects and town planners.

The Brick Situation

In view of the comments in the Press concerning the brick situation and the industry's ability to supply the large quantities required to meet the Government's extensive housing drive and for factory and other building programmes, the National Federation of Clay Industries has issued a statement which recalls the severe wartime contraction experienced by the industry (production in 1945 was only 1,226,704,000), and goes on to say that brick production calls for long-term planning and a stable market as a prerequisite for progressive development. Production figures for the last eight years are given which show an increase over that period of from 3,449,816,000 in 1945, to 6,622,000,000 in 1952. The statement goes on to say that:

The Minister of Housing has recently appealed to Housing Authorities to obtain their requirements from the local brickworks, even though the prices of the local products may be higher than those of bricks brought in from other areas. If that appeal is acted upon, the production, which has remained at a low level in some areas, would be increased substantially; this would make a material contribution towards easing the supply position in 1953.

Manufacturers in all districts will continue their efforts to increase their outputs still further. Increases on the scale of those of 1952 may not be practicable, but there are good reasons for believing that the 1953 output will reach at least 7,000 millions. It is understood that the Government's estimate of overall demand for 1953 for housing and all other building programmes, is approximately the same figure. The supply and demand position will vary, of course, from area to area, and it may be aggravated by the inability to transfer supplies from one area to another owing to uneconomic transport costs. It is well to remember that bricks are the cheapest manufactured building material and that the cost of transport beyond a limited radius may be higher than the prices of the bricks themselves. It is not likely, however, that the local problems will be of such a magnitude as will prejudice the general progress of the national housing or any other important building programme.



The new London Headquarters of the British Rayon & Synthetic Fibres Federation was opened this week at Hamilton House, 138 Piccadilly. Illustrations of the interior decoration which have been designed by Professor R. D. Russell will be shown in next weeks issue.

The Government is adequately informed regarding the productive capacity of the industry. The position is under continuous examination by the Brick Management Committee of the National Federation of Clay Industries, which consists of representatives from the Area and Regional Federations and Associations. This body maintains constant and close co-operation with the Ministry of Works. Similarly, the Regional and Area organizations maintain close liaison with the Regional Offices of the Ministry. In that way, the Minister and his advisers are given regular progress reports covering the different areas, and these are carefully examined in the light of area demands.

Recent statements that the brick industry needs help in the form of Government loans or subsidies do not reflect the general opinion of the industry. Manufacturers consider that the most effective help which the Government can give is substantial relief from the present penal level of taxation. As stated earlier, the industry's resources were sadly depleted during the long period of wartime closure; by the abnormally heavy costs of bringing works back into production; and by the effects of the dislocations caused by the repeated changes in capital expenditure programmes during post-war years. When taxation demands have been met, there is little left for costs of maintenance and replacements, and to provide the necessary working capital; quite certainly, in the majority of cases, there is little or nothing left for plant extensions. The position is further aggravated by the Excess Profits Levy, based on bad standard periods, when production and demand were low. Brickmaking is a wasting asset industry, i.e., it is living on its mineral resources, and is being called upon to use up its raw material reserves at an abnormal rate in order to meet a national emergency. In such circumstances, the Excess Profits Levy and the general high level of taxation is not conducive to unlimited development.

The Architect and You

On February 18 Mr. Harold Macmillan, Minister of Housing and Local Government, will open at the Royal Institute of British Architects, 66, Portland Place, W.1, an exhibition entitled "Home and Surroundings." This is the first in a series of travelling exhibitions under the general title "The Architect and You" and has been specially designed for touring the country. It illustrates the architect's contribution to the problems of siting, lay-out and landscaping and will be on view till February 28 (Monday-Friday 10-7 : Saturday 10-5) prior to the commencement of the tour.

Building in the Netherlands

An exhibition of photographs, drawings and models showing post-war building and planning in the Netherlands will be shown at the R.I.B.A. from February 25 to March 28, weekdays 10-7, Saturdays 10-5.

Housing Progress : December 1952

The number of permanent houses completed in Great Britain during December was 23,395 compared with 19,322 in December, 1951. The number of permanent houses completed in Great Britain during the year 1952 was 239,922 compared with 194,831 during the previous year.

Middlesex County Council Development Plan, Late Objections

Arrangements are being made for the holding of a public local inquiry next month into the 7,000 objections received to the Middlesex County Council's Development Plan. The official closing date for objections was August 31, 1952, but the Ministry of Housing and Local Government have continued to record objections received since that date.

A programme is being worked out for the hearing of all objections received in the Ministry up to February 10. Any objection received after that date cannot be guaranteed a place in the programme.

OBITUARY

We regret to announce the death of Mr. C. H. James, R.A., F.R.I.B.A. Mr. James, who was 60, had been ill for some weeks and died at his home on February 8 from influenza and pneumonia.

The death is announced of Mr. Charles Walter Isard, Sales Director of Cellactite & British Uralite, Ltd., Gravesend, with whom he had been associated since the company's inception over thirty years ago. He was also a Director of the associate company of Nuralite Sales, Ltd.

IN PARLIAMENT

From our Parliamentary Correspondent

Choosing Architects

Mr. Vane asked the Minister of Works what principles guided him in his choice of an architect when it was decided to build a new British Embassy or legation in a foreign capital, or extensively rebuild existing premises. Mr. Eccles' reply was that the choice of an architect for a Government building overseas was determined by local conditions, such as climate and architectural tradition, and by the experience and talent available within the Ministry and outside. The aim in each case was to select an architect specially qualified to carry out the work, and the choice might fall on a Ministry of Works architect or on an architect in private practice either in this country or locally. (Feb. 4.)

Coronation Stands

The Minister of Works stated in a reply to Mr. J. T. Price that the prices of £6 and £4 for seats on Coronation stands were calculated on the average cost of construction, and were, in fact, below the costs as now known. (Feb. 3.)

Scottish Stone

Mr. Molson, Parliamentary Secretary to the Ministry of Works, informed Mr. P. Maitland that it was expected that the report on the Scottish stone building industry, prepared by the Dept. of Scientific and Industrial Research, would be available on or about Feb. 13. Mr. Maitland said the industry was eagerly awaiting it. (Feb. 3.)

Saving Bricks

Mrs. Ward asked the Minister of Fuel and Power what saving in bricks was expected to result from the different designs of the power stations to be built at Carrington and Wakefield, respectively. Mr. Lloyd said that Carrington used 10 million bricks and Wakefield should use between 2,500,000 and 3,000,000—a saving of 75 per cent. Mr. Gaitskell: What has been used in place of bricks? Mr. Lloyd: One of the chimneys is being made of concrete instead of bricks. (Feb. 2.)

A Historic House Bill

The Government were urged again on February 6, in a motion by Mr. Colegate, to introduce legislation at the earliest practicable date to give effect to the objectives of the Gowers report. These, in brief, were that a statutory body should be created, called the Historic Buildings Council, to select houses and co-ordinate interested agencies, and that owner-occupiers should be entitled, on conditions, to some form of tax relief.

The reply of Mr. Eccles, Minister of Works, was more explicit than previous statements, and although not promising early legislation, seemed to indicate a possibility of it some time this session. He stated that the Government had a historic houses Bill under consideration, but he could give no undertaking about when it would be introduced. He hoped that when the Bill—now being drafted—was introduced it would be regarded as non-contentious, and passed at the earliest practicable date.

Mr. Eccles agreed that the deterioration and decay, and in a growing number of cases the demolition, of masterpieces of British domestic architecture was assuming the proportions of a tragedy. The Chancellor of the Exchequer had indicated his willingness to help, but the £250,000 available severely limited what could be done. It meant that the general proposals of the Gowers report could not be carried out, and must await more favourable times. The Ministry would have to put in hand a first-aid operation, and consider not the full-scale preservation of the 2,000 houses envisaged in the report but what it would cost to maintain 50 or 100 of the finest of them. The Treasury calculated it would cost the revenue £10 millions to carry out the full recommendations, and he thought that an under-statement.

It would be necessary to discriminate carefully in choosing the 50 to 100 houses which could be looked after with the £250,000. There would be pressure to spend the money too thinly. They must concentrate on the number and variety of houses which would leave posterity a fair sample of all styles and periods; some would be large, some small, some in the country and some in city streets. He wished to give our own architects a chance, which they had not now, to design masterpieces which some future House of Commons 200 or more years hence would vote money to preserve. It would be impossible to set up a new organization without using up a great deal of the money, but it was hoped to have a historic buildings council to advise him on the houses best qualified for financial aid.

He also announced that the Chancellor had authorized him to say that in the next Finance Bill he proposed to make provision to enable chattels to be accepted in lieu of death duties in connection with historic buildings; and that it was intended that in the proposed Historic Houses Bill public access to the buildings would be a condition of financial assistance.

An interesting point made by Mr. Hamilton Kerr during the debate was that many of the most skilled craftsmen engaged on the restoration of the House of Commons were over 80 years of age, and that had the order to rebuild come 10 or 15 years later it might have been impossible to obtain the same standards of wood-carving and masonry.

The motion was agreed to.

COMING EVENTS

The Royal Institution of Chartered Surveyors.
February 16 at 5.30 p.m. Address on "The Valuation of Plant and Machinery for Rating Purposes," by Arthur Lockwood, M.B.E., F.R.I.C.S., at 12, Great George Street, S.W.1.

The Housing Centre.
February 17 at 6 p.m. Talk on "Housing Aspects of the Census," by Miss Mary P. Newton, M.A., General Register Office, at 13, Suffolk Street, S.W.1.

The Column Group.
February 18. Talk by R. H. Matthew, Esq., C.B.E., A.R.I.B.A., Attingham Park, Column House, London Road, Shrewsbury.

London Industrial Co-ordinating Committee.
February 18 at 2.30. Inaugural Meeting of the Accident Prevention Group for Building and Engineering Contractors, in the Conference Room of the Safety, Health & Welfare Museum, Horseferry Road, S.W.1.

Royal Society of Arts.
February 18 at 2.30 p.m. Talk on "British Inland Waterways To-day and To-morrow," by Robert Aickman, Founder and Vice-president, The Inland Waterways Association, at John Adam Street, Adelphi, W.C.2.

Victoria and Albert Museum.
February 18 at 6.15 p.m. "Hampton Court Palace," by John Summerson, F.S.A., A.R.I.B.A., Curator of Sir John Soane's Museum, at Victoria and Albert Museum, South Kensington, S.W.7.

Institute of Landscape Architects.
February 19 at 6 p.m. "Capability Brown and his Gardens," by Dorothy Stroud (illustrated), at the Housing Centre, 13, Suffolk Street, S.W.1.

Royal Institute of British Architects.
February 19-28. Preview of R.I.B.A. Travelling Exhibition "Home and Surroundings." Mon.-Fri., 10 a.m.-7 p.m., Saturday, 10 a.m.-5 p.m., at 66, Portland Place, W.1.

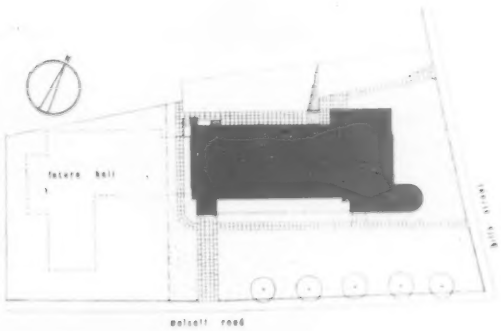
Society of Chemical Industry.
February 19 at 6 p.m. "The Stability of Asphalt Mixtures as Affected by Aggregate Size," by Dr. B. H. Knight, at The Building Centre, 26, Store Street, Tottenham Court Road, W.C.1.

Student Planning Group.
February 19 at 6.30 p.m. Forum: "Outdoor Advertising in this Country is Excessive and Bad." Speakers: G. S. Campbell, Frank Clark, A.I.L.A., H. G. Ellinger, H. H. Jackson, A.M.T.P.I., A.M.I.Mun.E., and Ian McCallum, A.A.Dipl., A.R.I.B.A., at 28, King Street, W.C.2.

Britain-China Friendship Association.
February 20 at 7 p.m. Lecture on "An Architect in China," by F. Skinner, A.R.I.B.A., of Messrs. Skinner, Bailey & Lubetkin, at the Conway Small Hall, Red Lion Square, Southampton Row, W.C.1.

ALL SAINTS CHURCH DARLASTON Staffordshire

The South-West front from West

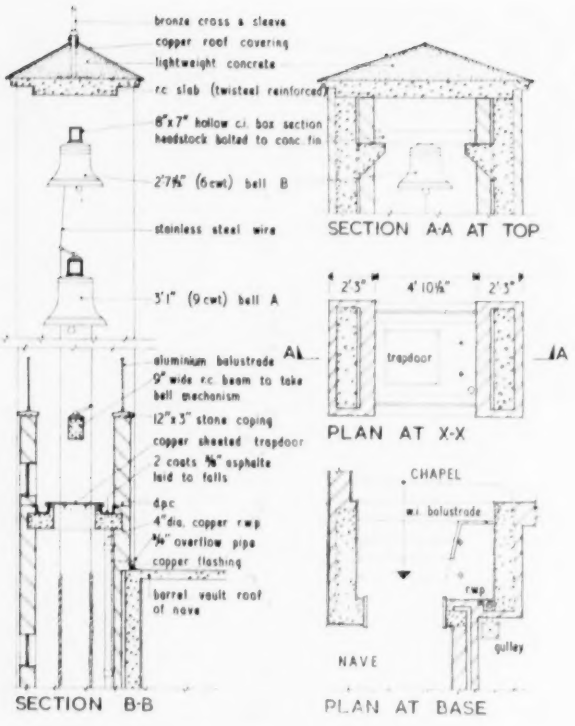


BLOCK PLAN

architects:
LAVENDER, TWENTYMAN & PERCY
F/A.R.I.B.A.

THE new building which replaces a Victorian church destroyed by a bomb in 1942, has been built on the same site over a large crater. The site falls from south-west to north-east and has a clay subsoil.

A traditional type of plan was required with the choir between the congregation and the Sanctuary. The Church seats 352 in the Nave, with pews for 294. The Lady Chapel seats 42 and the Choir 30. The organ is placed in a chamber without visible pipes and incor-



DETAILS OF THE TOWER

ALL SAINTS
CHURCH
DARLASTON

porates a system of moving shutters between the chamber and the body of the church.

A Hall to seat 200 will in due course be built on the land to the west of the Church.

Construction

The main building has a reinforced concrete frame and roof with brick panel walls; the vestries and Chapel have load-bearing brick walls and flat concrete roofs. The main concrete frames are U-shaped, 9in. wide, and support the suspended floor of the Nave, the edge-beams of the barrel roof and the eaves beams. The barrel roof gives the maximum internal height for a given total cube, and the interior does in fact give the visitor an impression of greater height than was expected. The internal frames shield the congregation from any glare from the large south windows, and a similar purpose is served by the concrete fins in the north and south walls of the Sanctuary.

Below these frames are reinforced concrete piers which go down to a depth of 12 feet below floor level. The piers are set inwards to reduce the bending moment on the frames. Over the bomb crater mass concrete piers are taken down a further 8 to 15 feet. The brick walls are supported on wall beams connecting the frames.

The barrel roof is 5in. thick at the sides and tapers to 2½in thick at the crown; above this is a vermiculite insulating screed which varies in thickness so as to give concentric curves to the inside and outside of the finished roof.

The tower consists of two 12in wide concrete fins, encased in brickwork, with concrete corbels to take the bell headstocks.

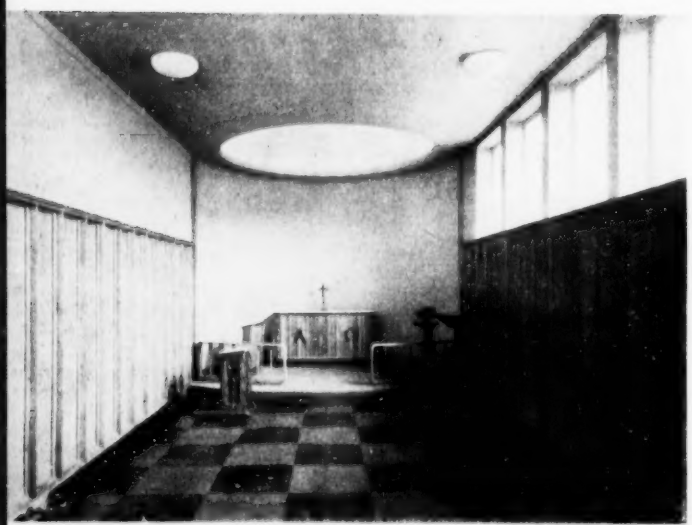
Finishes

Externally, walls are faced with 2⅝in brown hand-made bricks. Window mullions and door surrounds are of Portland Stone fixed with bronze cramps. Curved roofs are of copper on a vermiculite screed; flat roofs are of asphalte on woodwool slabs. Gutters and down-pipes are of copper. Windows are of aluminium, painted pale grey.

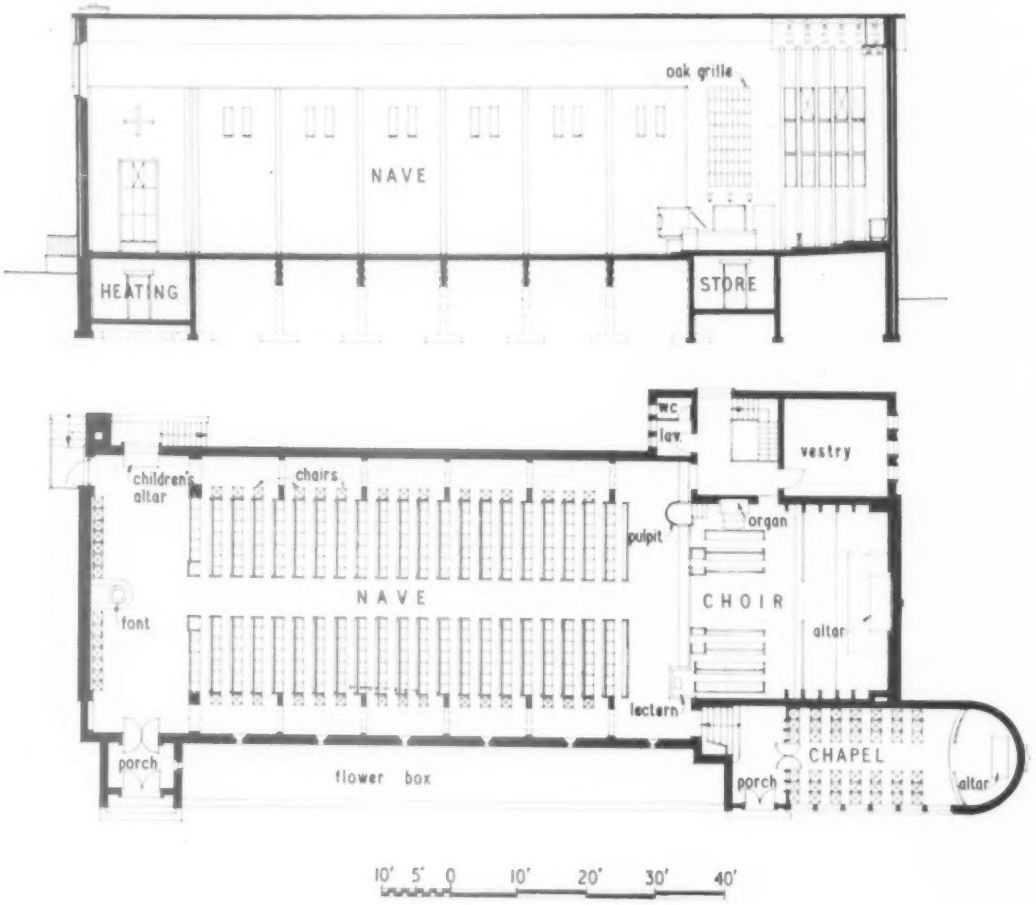
Indoors, floors are finished in Travertine in the Sanctuary, York Stone in the main porch, Granwood blocks in the Nave and asphalte tiles in the vestries. The Choir is close-carpeted.

The walls of the Nave are rendered in a pinky-grey self-coloured lime and stone-dust mix with a scraped finish. The east wall is faced with Travertine slabs, and the west wall down to dado level with an acoustic spray; the dado of this wall and the curved wall of the Chapel Sanctuary are faced with reeded fibrous plaster.

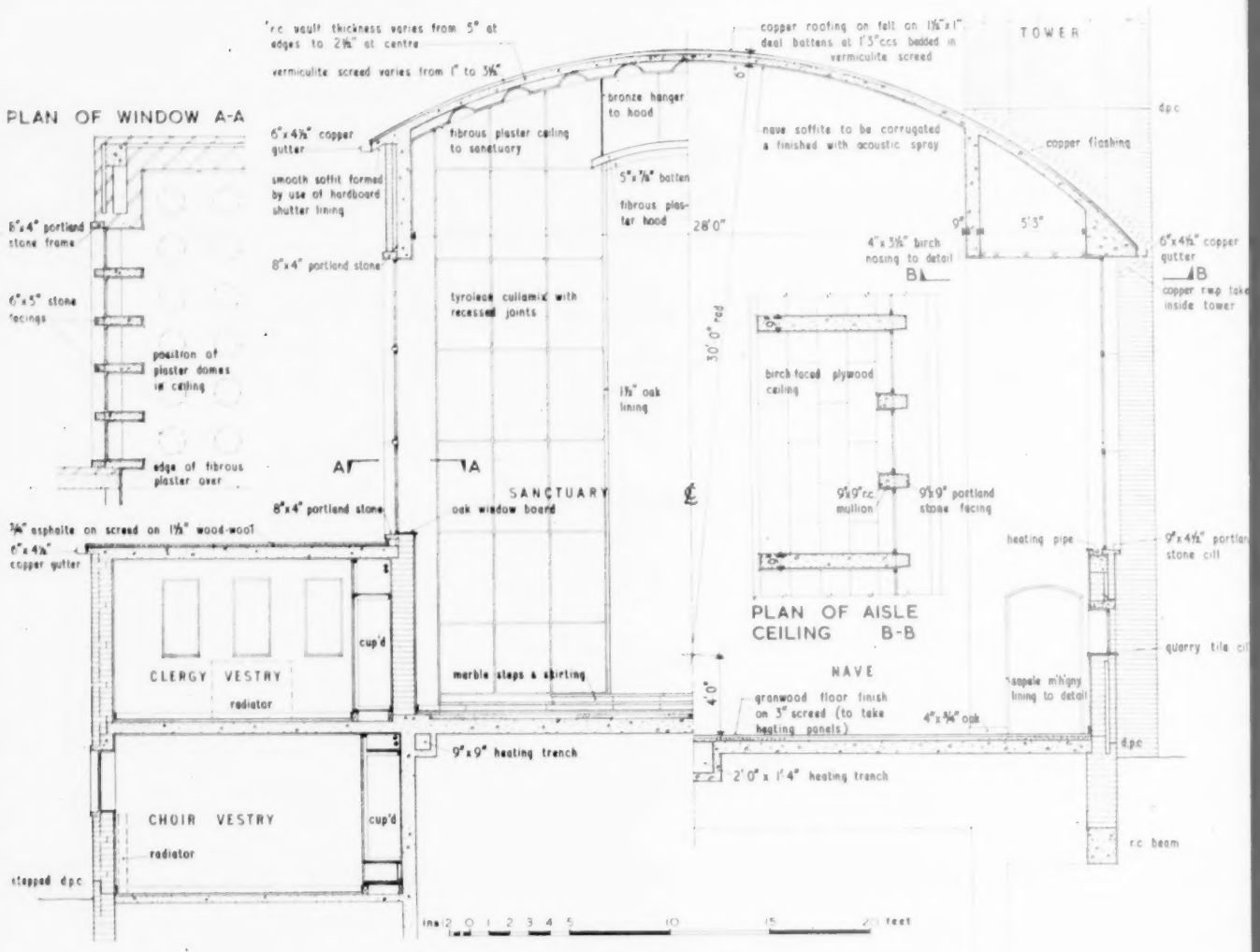
[Continued on page 196



The Lady Chapel which incorporates the memorial tablets from the old church in the new oak panelling. The curved East wall is finished in fibrous plaster and the curved dome which incorporates concealed lighting is covered with acoustic spray. Squares on the floor are a dark red and grey colour. Walls are pale grey; ceiling—sea green.



South elevation to Walsall Road



HALF SECTIONS THROUGH NAVE AND SANCTUARY

Continued from page 194

The Nave ceiling is covered with an acoustic material sprayed on to the concrete which itself was cast on carefully placed corrugated iron shuttering to give a reeded effect. The aisle ceilings are of oak-faced plywood with V joints. The Sanctuary ceiling is of fibrous plaster, painted pale blue-grey.

The pulpit is of reinforced concrete, rendered as the walls, with a carving in Ancaster Stone let in and the bass is faced with blue-green mosaic. The font is of black granite with incised gilded lines, and the cover is of sycamore with a design of fishes incised in black lines.

All joinery, except in the vestries, is of oak. The panelling in the Chapel was designed to incorporate existing lettered memorial panels. The carving in stone round the main entrance and on the pulpit, also the carved oak lectern, is the work of Donald Potter. The painted bronze coat of arms over the Chapel Entrance is that of the Lichfield Diocese.

Furnishings

Except for a few existing pieces of furniture, the altars, pews, reading desks, etc., were made to the architect's design in oak. The large dorsal curtain behind the main altar is in blue-grey with silver and bronze threads.

Services

Heating is by invisible panels in the floor with low pressure hot water from a gas-fired boiler. The Chapel has an additional tubular electric heating system for topping up during the week. The Nave is lit mainly from the aisle ceilings. In each bay is a box containing three reflectors directed at the centre aisle; each box has a hinged frame set flush with the ceiling and glazed with ribbed glass. There are subsidiary low power wall fittings on the east side of each fin. The Sanctuary is lit from flood lights recessed between the fins at each side.

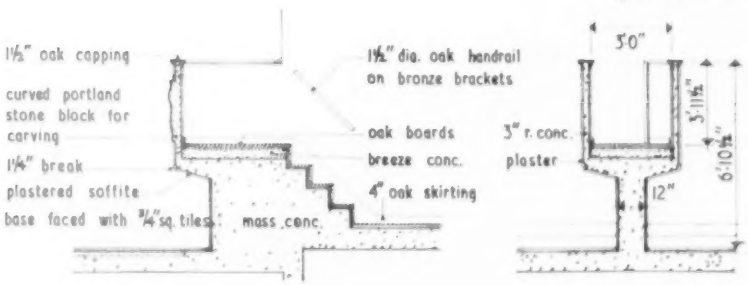
Cost

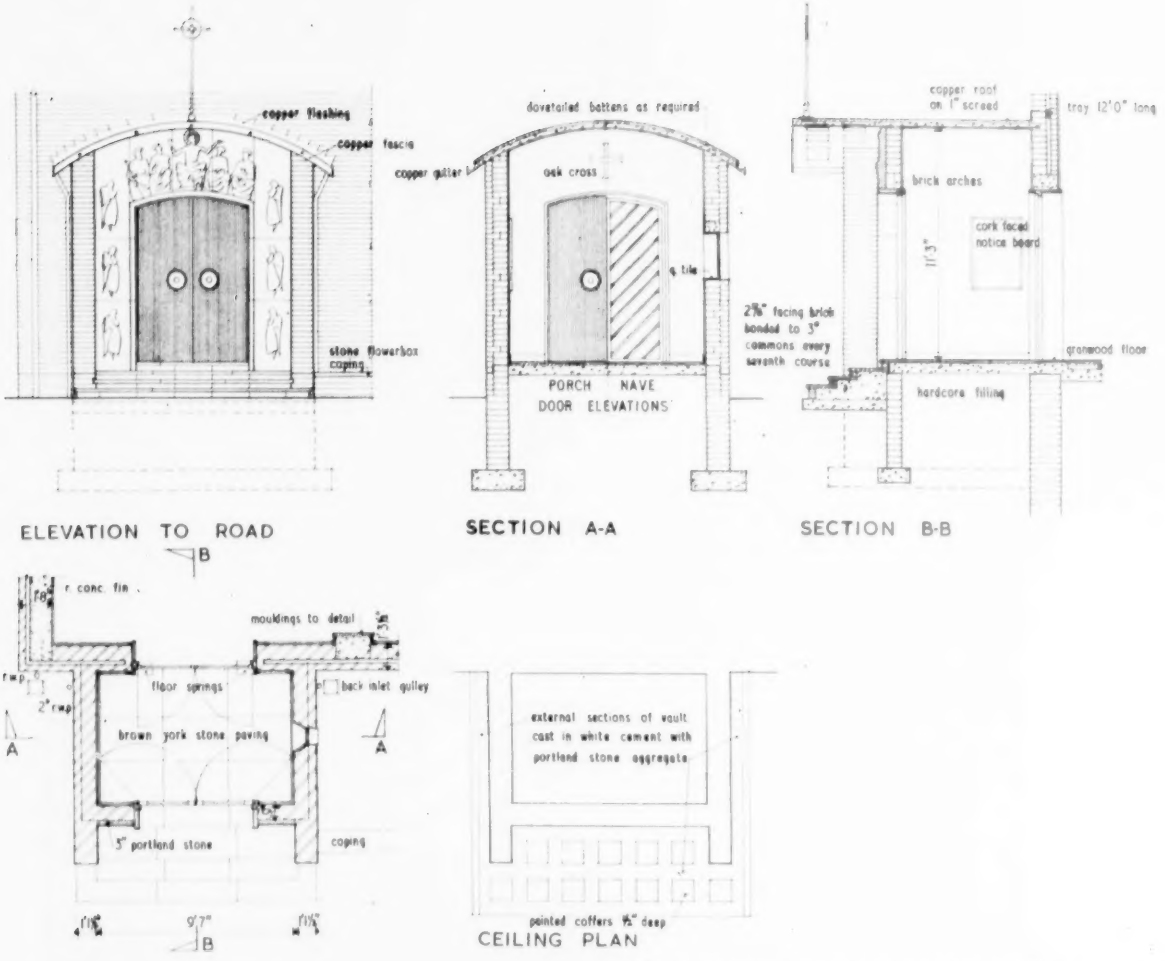
The cost, including special foundations, site lay out, bells, choir stalls, altars, etc., but excluding organ, pews and carpets, was approximately £35,700. The cube rate (taking the height of the main building from 4 feet below floor level), was 3s 6d per foot cube.

The Sanctuary, seen from the East side of the nave. Note the system of shutters between the organ chamber and the body of the church.

ALL SAINTS
CHURCH
DARLASTON

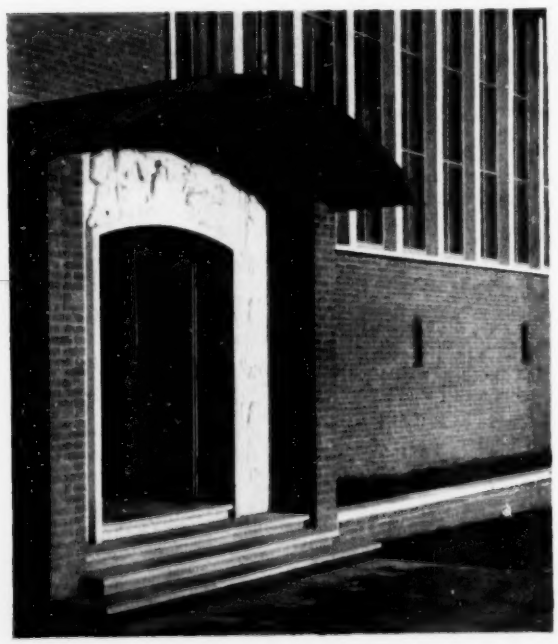
Pulpit Details





DETAILS OF THE ENTRANCE PORCH. Scale: ½ in. = 1 ft.

Porch Showing Carved Portland Stone Facing



ALL SAINTS CHURCH, DARLASTON

Architects: LAVENDER, TWENTYMAN & PERCY

General Contractors: E. FLETCHER (Builders) Ltd.,

Subcontractors:

Acoustic Material: Newalls Insulation Co. Ltd. *Aluminium Windows:* James Gibbons Ltd. *Asphalte Roofing:* Limmer & Trinidad Lake Asphalt Co. Ltd. *Bells:* John Taylor & Co. *Bricks—Facing:* George Armitage & Sons Ltd. *Bishop's Chair and Dorsal Curtain:* Heal's Contracts Ltd. *Bronze Shield:* William Loxley. *Concrete Reinforcement:* Twisteel Reinforcement Ltd. *Copper Roofing, Gutters and Downpipes:* Fredk. Braby & Co. Ltd. *Electric Lighting:* Reynolds & Bradwell Ltd. *Fibrous Plaster:* Allied Guilds Ltd. *Flooring:* Armstrong Cork Co. Ltd.—Accotile Granwood Flooring Co. Ltd. *Font, Altars, Litany Desks and Clergy Seats:* Pancheri & Hack. *Heating:* G. N. Haden & Sons Ltd. *Marble Wall Facing and Flooring:* Anselm Odling & Sons Ltd. *Organ:* The John Compton Organ Co. Ltd. *Self-coloured Rendering:* Callow & Keppich Ltd. *Stone Facings:* Bath & Portland Stone Firms Ltd. *Turfing:* Bakers Nurseries Ltd. *Vermiculite Screeding:* Meta Mica Ltd.

Type "A" Blocks from South

POLLARDS HILL ESTATE

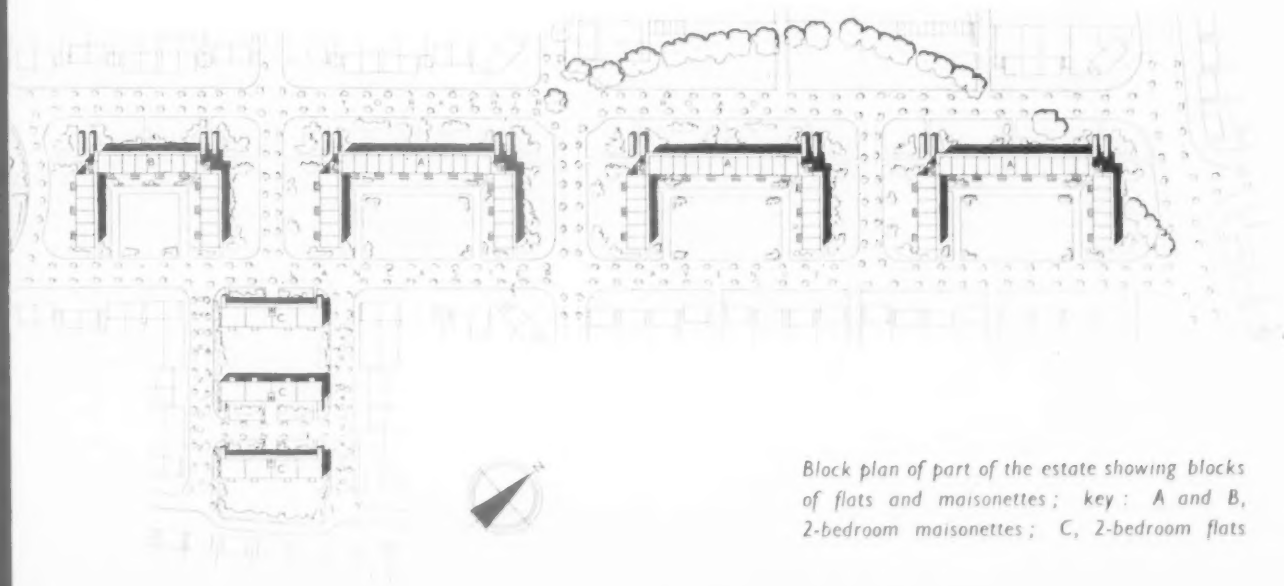
for Mitcham Borough Council

architects: COLLCUTT & HAMP

THESE flats and maisonettes form part of Pollards Hill Estate, one of the post-war re-housing projects undertaken by Mitcham Borough Council. The estate which has been carried out in three stages, is made up of 345 Arcon Houses, 277 Wates Houses and 324 flats and maisonettes, a total of 946 dwellings.

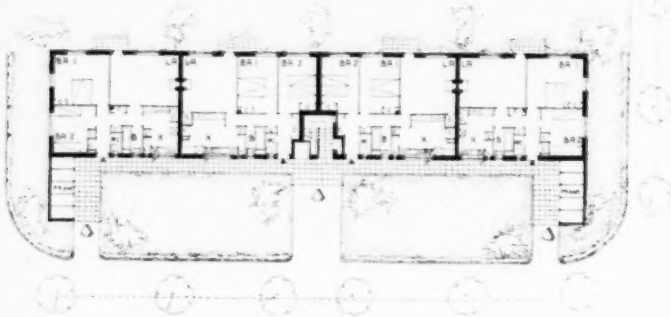
The architects, who worked closely with the Borough Engineer, Mr. Riley Schofield, were responsible for the lay-out of the site as a whole as well as the design of the multi-storey buildings. The three four-storey blocks which were built between September, 1949, and September, 1950, contain 48 two-bedroom flats; the four six-storey blocks which were built in under two years (the last block went up in eight months), contain 276 two-bedroom maisonettes.

The four-storey blocks have load-bearing brick external walls with four spinal columns internally, on piled foundations. The six-storey blocks are of reinforced concrete



Block plan of part of the estate showing blocks of flats and maisonettes; key: A and B, 2-bedroom maisonettes; C, 2-bedroom flats

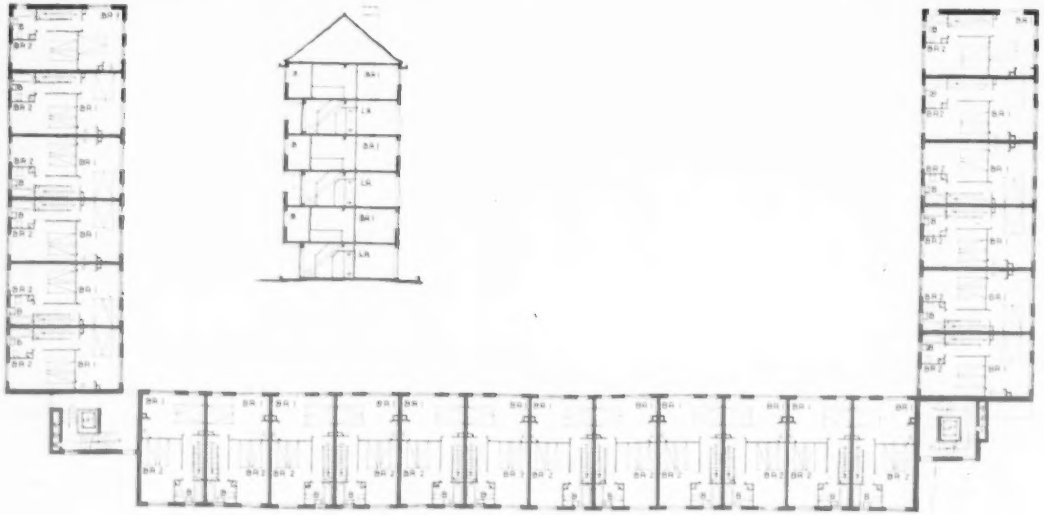
POLLARDS HILL ESTATE



Block C. Typical ground floor plan

Type "C" Block

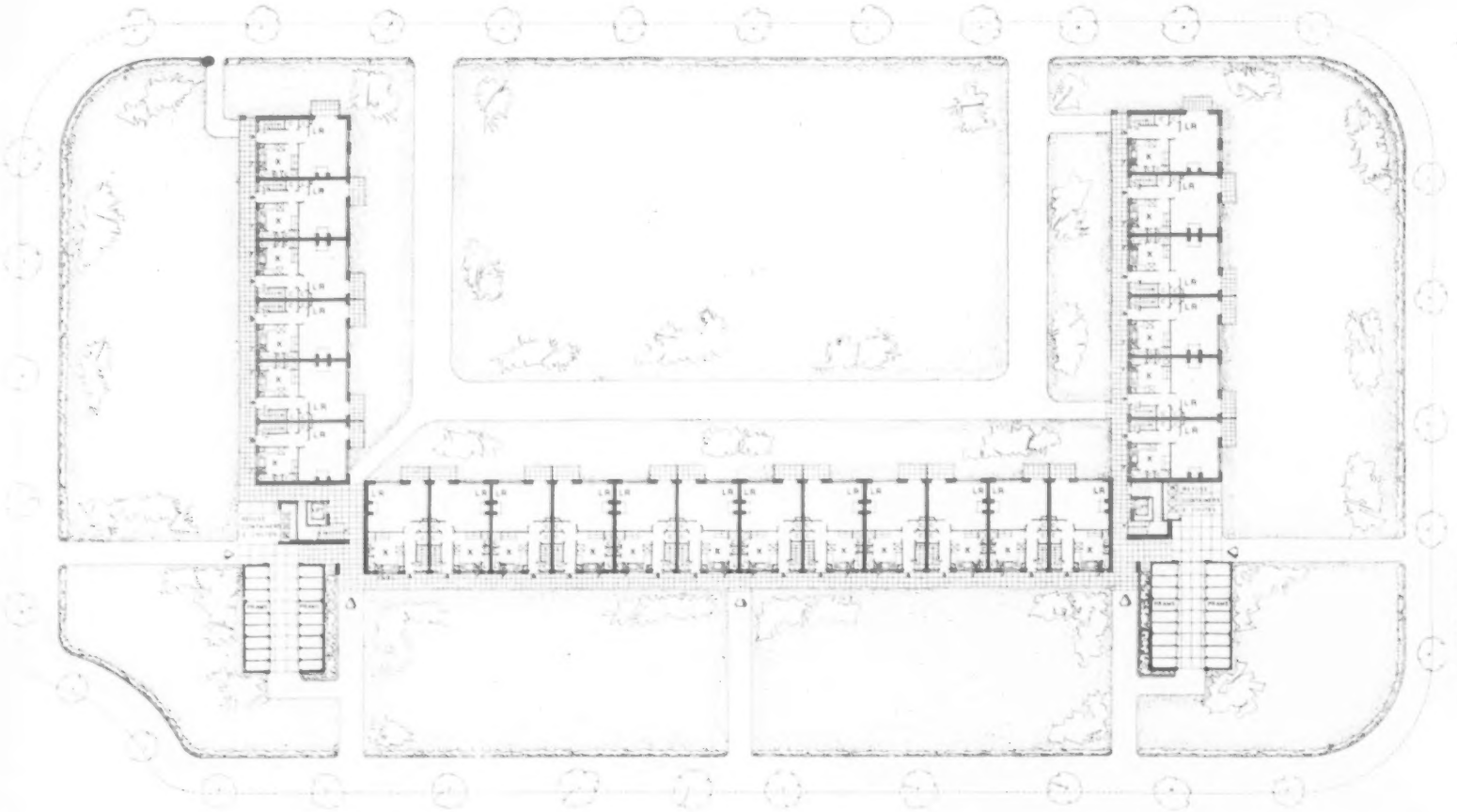
Block A. Section, first, third and fifth floor plans



frame construction on *in-situ* piles with cavity walls of brick and breeze block, and solid R.C. floors.

Two and a half flats per week were erected over a period of two years. This speed of erection was made possible by the use of a semi-mobile crane for all bulk handling of materials, but each six-storey block had to be built in two halves as the crane could not cover more than 200ft at one time. A mobile batching plant fed by a conveyor was used for concrete mixing. A concrete placing hopper was specially designed and scaffolding and shuttering carefully selected to work in with the crane. A carpenter's shop was installed on the site with electric tools and a power bender was used to shape the reinforcement.

On the early contract for the four-storey blocks using a hoist the concreting operation cost 14s 6d per yard cube, whereas on the larger six-storey blocks, using the crane, the average cost was only 9s per yard cube. The fixing costs of floor shutters progressively decreased from 11¼d per square yard to 9⅜d per square yard on the last block. Similarly the fixing of the beam shuttering fell from 6¼d per ft super to 4⅜d per foot super.



Block A ground second & fourth floor plans

architects: COLLCUTT & HAMP

General Contractors: WATES LTD.

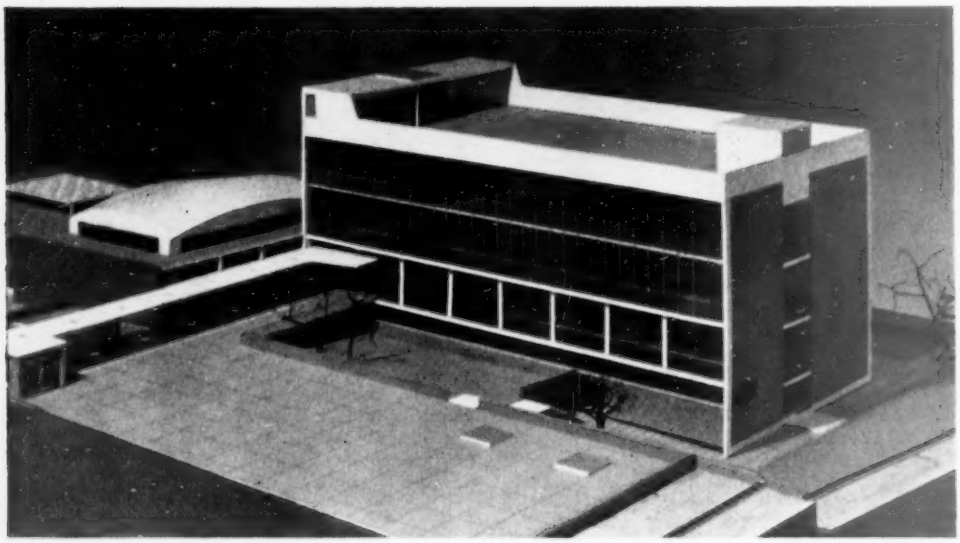
sub-contractors

Artificial Stone : Gitlings' Ferro-concrete Co. Ltd. ; Enfield Stone Co. Ltd. ; Liverpool Artificial Stone Co. Ltd. *Asphalt Floors* : Durable Asphalt Co. Ltd. *Asphalt Paving* : Durable Asphalt Co. Ltd. ; General Asphalt Co. Ltd. *Bricks, Facing* : Robert Y. Ames ; Richard Parton (Builders Merchants) Ltd. ; Uxbridge Flint Brick Co. Ltd. *Back Boiler Fires* : Radiation Ltd. *Casement Doors (Steel)* : Crittall Manufacturing Co. Ltd. *Concrete Windows* : J. A. King & Co. Ltd. *Doors* : Evos Ltd. ; H. Newsum Sons & Co. Ltd. E. H. Smith (Croydon) Ltd. *Dry Rising Main Fittings* : S. Dixon & Son Ltd. *Dust Chute Fittings* : Shelvoke & Drewery Ltd. *Electrical Work* : T. Clarke & Co. Ltd. ; G. J. Monks of Wimbledon ; F. H. Wheeler & Co. Ltd. *Fireplace Surrounds* : Zanelli (London) Ltd. *Gas Installation* : South Eastern Gas Board. *Glazed Wall Tiling* : Allan & Cairns (Tilers) Ltd. ; Hall & Co. Ltd. ; Parkinsons (Wall Tiling) Ltd. *Glazing* : Faulkner Greene & Co. Ltd. ; W. H. Meadows ; James Thow Ltd. *Ground Exploration* : Le Grand, Sutcliff & Gell Ltd. *Ironmongery* : Young & Co. (Kennington) Ltd. *Kitchen Fittings* : E. & H. Grace Ltd. ; H. Newsum Sons & Co. Ltd. *Lifts* : Hammond & Champness Ltd. *Logical Bunkers* : Stopper Manufacturing Co. Ltd. *Nameplates* : Royal Label Factory. *Painting* : T. E. Cundy & Son Ltd. ; Bexley & Nye. *Piling* : Cementation Co. Ltd. *Plastering* : W. A. Telling Ltd. ; T. F. Rooney & Sons Ltd. ; F. F. Young. *Plastic Tile Floors* : Armstrong Cork Co. Ltd. *Plumbing* : R. A. Brinkworth Ltd. *Railings and Ornamentation Ironwork* : Adrian Stokes Ltd. ; R. Smith (Horley) Ltd. *Relay Wireless and Television* : Telefusion Ltd. *Roads and Sewers* : Mears Bros. (Contractors) Ltd. *Roller Shutters* : Haskins. *Roof Tiling* : Marley Tile Co. Ltd. *Sanitary Fittings* : General Light Castings Co. Ltd. ; John Knowles & Co. (London) Ltd. ; J. Young & Co. (Kennington) Ltd. *Slab Partitions* : T. H. Marriott (Merchants) Ltd. *Water Supplies* : Metropolitan Water Board. *Windows* : Austins of East Ham Ltd. ; British Pressed Panels Ltd.

PROPOSED EXTENSION TO THE SAMUEL PEPYS

for the L.C.C.

architects: GOLLINS, MELVIN, WARD & PARTNERS



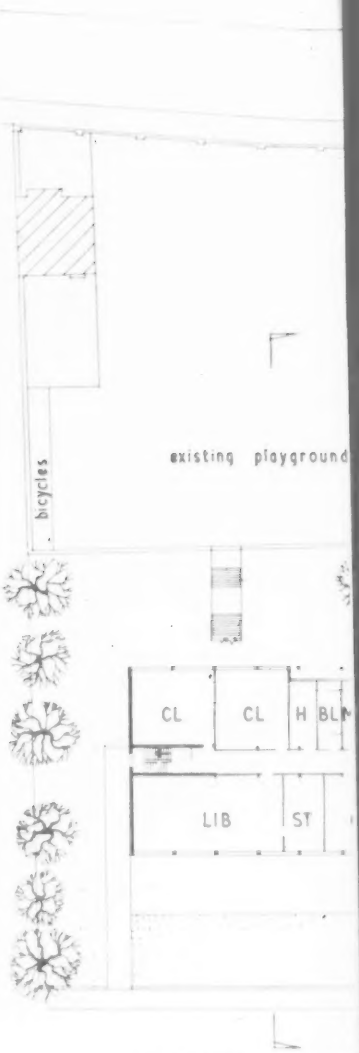
The model from South-West

THE schedule of the proposed extensions to this school is approximately equal to a new three-form entry (boys) secondary modern, but with modifications to conform to the existing accommodation, in particular with regard to the number of the workshops, the additional assembly halls and the provision of a kitchen large enough to serve the children in both the old and new buildings.

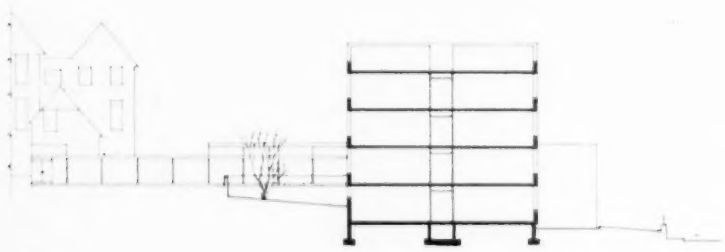
The school, which is surrounded on all sides by residential property, lies near the top of the hill between New Cross and Brockley, and the land available for the extension is restricted to the existing playgrounds and to a small area of undeveloped land between the school boundary and Sprules Road. To avoid reducing as much as possible the already under-size playgrounds, the greater part of the new accommodation has had, therefore, to be planned on this area which is some 230ft × 130ft and falls to the boundary road at a slope of 1 in 12.

General Planning

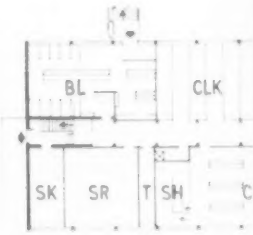
In addition to the restrictions imposed by the site, it was essential to consider the relationship of the new accommodation to that in the existing school and how best the



GROUND FLO

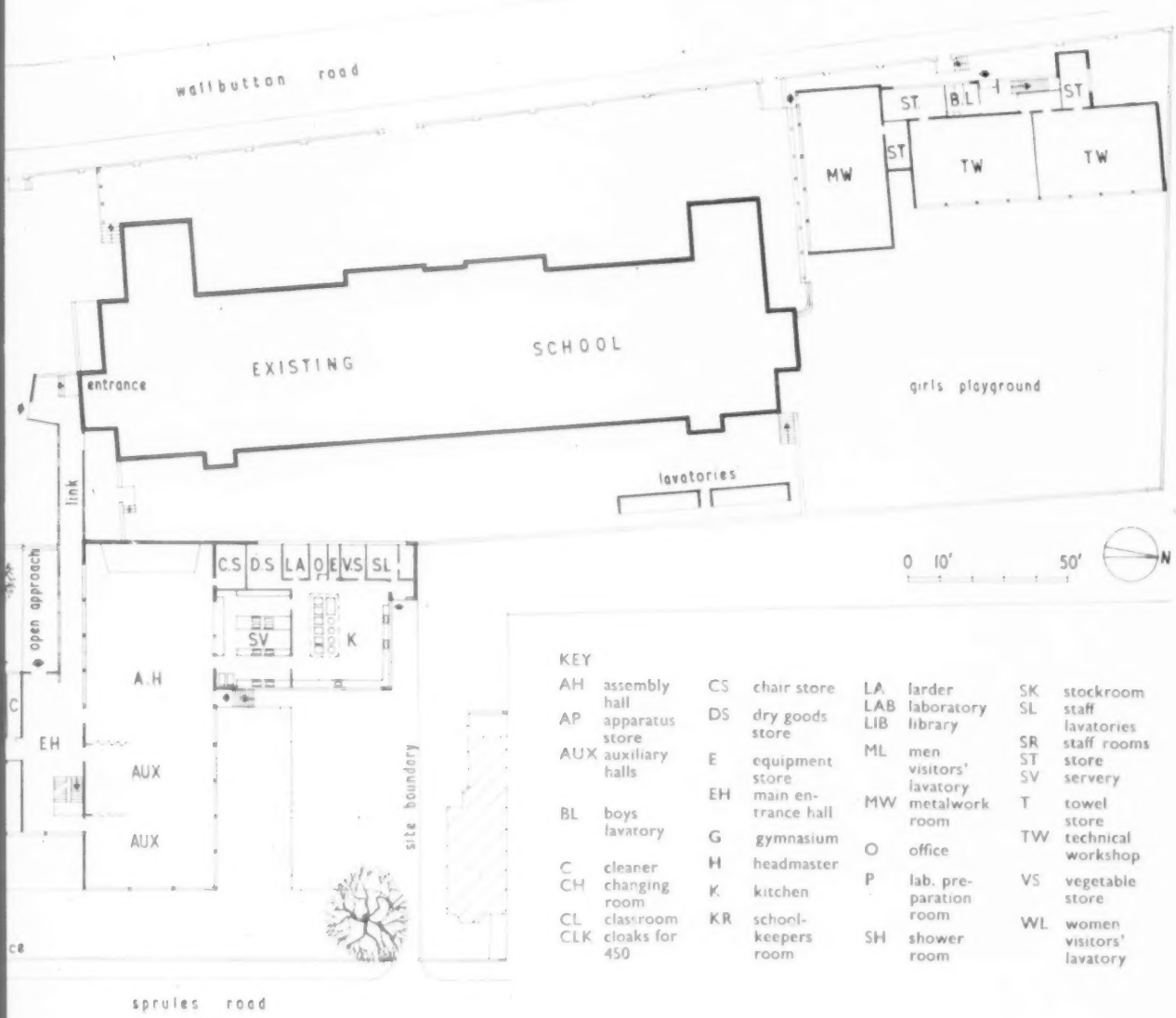


SECTION



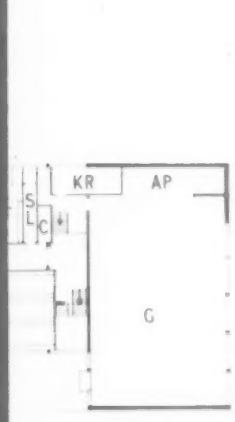
LOWER GROUND

SECONDARY SCHOOL, DEPTFORD

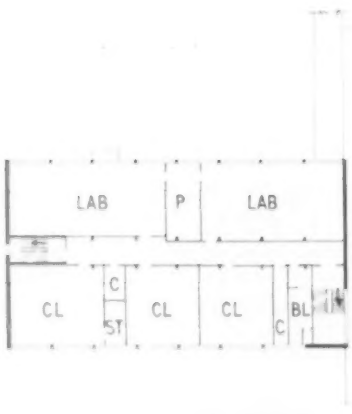


KEY

AH	assembly hall	CS	chair store	LA	larder	SK	stockroom
AP	apparatus store	DS	dry goods store	LAB	laboratory	SL	staff lavatories
AUX	auxiliary halls	E	equipment store	LIB	library	SR	staff rooms
BL	boys lavatory	EH	main entrance hall	ML	men visitors' lavatory	ST	store
C	cleaner	G	gymnasium	MW	metalwork room	SV	servery
CH	changing room	H	headmaster	O	office	T	towel store
CL	classroom	K	kitchen	P	lab. preparation room	TW	technical workshop
CLK	cloaks for 450	KR	schoolkeepers room	SH	shower room	VS	vegetable store
						WL	women visitors' lavatory



FLOOR



FIRST FLOOR (Typical of upper floors)

two buildings could be linked. This, and the necessity of separating the noisy workshops from the class and practical rooms indicated that the wood and metalwork rooms should be planned in a detached building on the boys' playground adjacent to the workshops in the north wing of the present school. The balance of the accommodation could then be provided in a multi-storied building on the undeveloped area of the site linked directly by covered way to the existing entrance, thereby ensuring that the kitchen and the assembly halls, which are planned for dual use as dining rooms, would be easily accessible to all the children.

Detailed Planning

The one large and two small assembly halls, kitchen, main entrance and covered way link are planned at the first floor level of the new building which, due to the steep contours of the site, is the ground floor of the existing school, and form a low wing, part on natural ground and part above the semi-sunk gymnasium, at right angles to the four-storied block. The effective area of the halls which can be used separately or together can be increased by additional seating in the entrance hall and covered way.

The lowest floor of the four-storied block is occupied by the staff room, changing rooms, locker rooms, cloakrooms and lavatories to which direct access from the playground is available; on the first floor there is the Head Teacher's office, library and three classrooms, and on the second and third floors the balance of the accommodation; on the roof which is reached by two staircases, one at each end of the building, there is an auxiliary playground 100ft × 50ft, from which there is a magnificent view over South London. All the teaching rooms have either east aspect over Sprules Road and the falling ground to Brockley or west over the playground. Small lavatories and cleaners' stores are planned next to the main staircase on each of the upper floors.

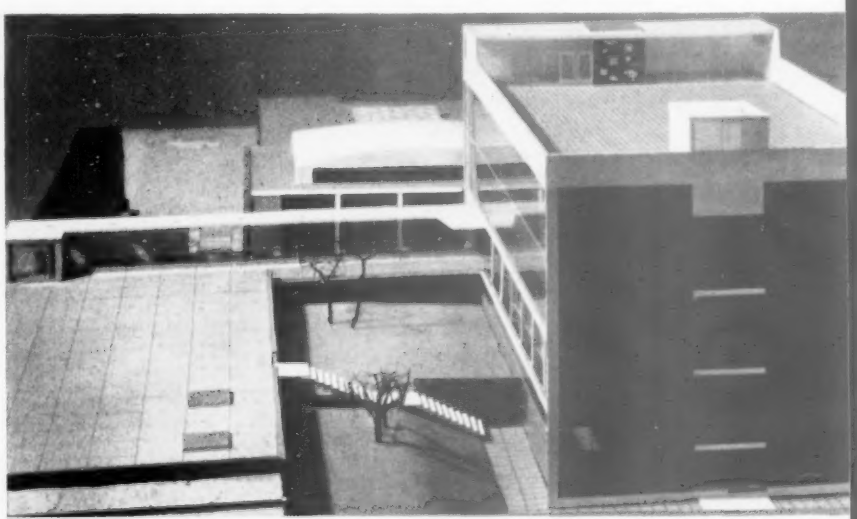
The workshop block is part one and part two storied with the engineering shops on the lower and the woodwork rooms on the upper floor; all rooms will look east over the north playground.

SAMUEL PEPYS SCHOOL

The Assembly Hall and Entrance Hall viewed from the Stage

The Assembly Hall looking towards the Link and Open Approach

View of the model showing link with the existing School



POINTS FROM PAPERS

THE TREND OF EDUCATION IN THE BUILDING INDUSTRY

A Talk given by Mr. D. WOODBINE PARISH, Immediate Past-President of the L.M.B.A. at the Architectural Association on February 28

The President, Mr. A. R. F. Anderson, was in the Chair

At the moment the building industry is passing through a very difficult period. We have first to give a great deal of thought to reassessing the position in which we find ourselves. We have to devote greater attention to our long-term problems and less attention to our day-to-day difficulties. It is important that we should study, with a view to ascertaining the reasons for our present position, the economic and industrial history of our industry over a fairly lengthy period. A study of the building industry over the last four or five centuries may help to give us the right perspective, but particular attention should be paid to the last hundred and fifty years.

All of us are aware of the main features of the Industrial Revolution. It started 170 years ago and culminated towards the middle of the nineteenth century in a burst of great technical development. We led the rest of the world, and the technical skill and ability of the people of this country surpassed that of anyone else in the world.

We are going through the second phase of that Industrial Revolution to-day, and it takes the form of a managerial revolution. Economics have impinged considerably on our way of life; irrespective of our calling, that economic impingement makes its mark. As an industry we are forced to realize that the shortening of the social scale, the lopping off of the top by taxation and the bottom by the benefits of the Welfare State, has produced an entirely different type of customer for our services. We have to consider what that customer wants us to do, and to direct our attention to the training and education which we require to do it.

We have in the building industry a considerable number of craft students. We regret that it is not a very much larger number than it is. We are directing our attention to that. At the moment there is a fairly large deficiency in the number of boys and girls entering industry and commerce, something of the order of 12½ per cent, and that position will not right itself until 1958 or 1959. The birth-rate went down very rapidly during the 1930s, and that has had a serious effect recently on the number of boys and girls leaving whole-time education and coming into industry and commerce.

These students become apprentices to the industry in very much the same way, and under the same sort of deed, as apprentices did three or four hundred years ago. The only difference is that they live at home and go from home to school and to work for us. One of our major problems is to correlate the responsibility of parents, schools and ourselves in order to see that a boy is taught all the things which he would have been taught when he was apprenticed to one master, who taught him the secrets of his trade, so that eventually he became a journeyman and finally a master himself.

Very good work is being carried on to-day by the City and Guilds of London Institute. It is an examining body for us, and each year a large number of young men present themselves for the examinations held by the Institute, which maintains a very high standard for the up-and-coming craftsmen in the building industry. I believe that the City and Guilds of London Institute, under the Presidency of the DUKE OF EDINBURGH, will be, during the next few years, a very potent force, not only in the building industry but in industry and commerce generally.

When the apprentices have obtained their intermediate and final certificates in their craft, they are encouraged to take their Ordinary and Higher National Certificates in building. Those certificates are directed towards broadening the minds of the apprentices and leading them into wider fields than their particular craft subject. These boys leave whole-time school at the age of 15, or if it is a secondary technical school at the age of 16. They serve an apprenticeship of four to five years, and up to the age of 18 are given by their employers day release to attend part-time at school for one day or two half-days a week to pursue their studies. In addition to that, but insufficiently at the moment, boys who leave school at the age of 18 are encouraged to undertake the National Diploma and Higher National Diploma courses which have been introduced at a number of the larger building colleges up and down the country. The intention of those courses is to take young men who have had a broader and more liberal education, taking them up to a near-degree standard in the Higher National Diploma, with a view to their occupying positions of executive importance in the industry in due course. At Manchester and Cardiff there are degree courses, and they also provide a very small number of the high-level brains necessary for the industry.

The whole of that development is going to change during the next few years. Our need in the industry is becoming much greater for the type of man with a broad, liberal outlook who can undertake the managerial function, which at the moment is our weakest link.

I shall make no reference to the arrangements for teaching future architects, other than to remark that I think there is a good deal to be said for the days when there were premium pupils and they did not do five years at a school. I believe that five years at an architectural school is too long; I should like to see three years, with more time spent in the practical application of their training in the industry both on sites and in offices.

In addition to all the other functions which an architect has to perform, is the managerial responsibility which each architect must assume if the job is going to be done at a reasonable cost; and, as we all know, at the moment building costs have got completely out of hand.

I believe that the master builder and the architect have to get far closer together in the planning of work. What is it that the building industry does? Put very simply, I think that it is a process of assembly, of taking a large number of materials and assembling them in a form which has been designed by the architect to meet the requirements of the client. If one looks on it as a process of assembly, one will realize that the most important part of that process is the managerial and organizational responsibility, the joint responsibility of architect and master builder. We do tend, both educationally and in our approach to our work, to live in separate vacua, but I hope that it will not be very long before these are broken down.

I hate to hear an architect say: "I have such-and-such a firm working for me." I should like to hear him say: "I have such-and-such a firm working *with* me." Those of us who are master builders and building trades employers should have the same attitude towards the men who work with us. We have an enormous opportunity to work as a team together, to pool all our resources and provide the community with a far higher standard of service than we are doing at the moment.

There are very many people concerned in this industry. We are all part of the industry; we are all links in a chain; but the strength of the chain is the strength of its weakest link, and unless all the links are strong the chain cannot be strong. We must have a high measure of goodwill between us; we must respect each other and have a high standard of moral integrity. If we do, our industry will prosper, but otherwise I do not think that that is possible.

We have to analyse all the functions which we perform and place the responsibility on those people who are ready to accept it, giving them the authority that their standard of proficiency entitles them to receive. Then, and then alone, shall we see the tempo of building going up.

We have now to set ourselves the task, however, of establishing a very large measure of goodwill from the top to the bottom of the industry. It must start at the very top.

I would plead with the architectural profession to believe that we can do this together better than we can separately. This is a process in which the architect is the designer and the master builder is the production engineer. No other industry keeps its design and production sides separate; design and production go hand in hand in all other industries. Our tendering system very often denies us that opportunity, and I believe that slowly but surely we shall come to realize that the tendering system is preventing our industry getting down to fundamentals. The sooner we have an inquiry into our present tendering system the better. Instead of a sort of Dutch auction in the supposed interests of the client, a first-class team of a competent architect and thoroughly reliable master builder could give services of such high quality that they would appeal to a great number of people, and then we may begin to get costs down to a level which the building owner can afford. At the moment the little man does his own decorations and the big man

stands on the side lines waiting for prices to come down. While they do that, you and I are going to find difficulties.

A totally different outlook exists among our operatives from that which prevailed before the war. We want a man who can give all his skill, ability and knowledge; it is not just his hands that we want. We want him to form part of the team. It is for architects and master builders to establish the climate and atmosphere in which men will give of their best. We have to plan to get away from wastage of material and wastage of effort due to poor organization and planning and all the things which frustrate men and prevent them from doing a good job. We have to encourage a far greater sense of courtesy and better manners between the various sections of the industry. I had no idea until recently of the sort of treatment meted out by certain architects to builders and by certain builders to their men.

I plead with the architects to believe that it must start with them. It must go through the master builders, the surveyors, the clerks of works, and so on, but if it starts at the top it will flow to the bottom. Give credit to the general foreman, the man who lives on your jobs and creates them. It is he who can make them a success; let us accept that fact. We can do much with a little gratitude, help, tolerance and sense of justice.

Points from the Discussion

MR. JOHN BRANDON-JONES, A.R.I.B.A., A.A.Dipl., who proposed a vote of thanks to Mr. Woodbine Parish, said: We have all appreciated what Mr. Woodbine Parish has said. One may be inclined to think of the builder as an enemy, on whom one has to keep an eye, but Mr. Woodbine Parish is smooth, anyway! He has talked about working in a team and the effect of a few kind words, and there is enormous truth in what he says. I am sure that you get more help on a job if you know enough about the work of the craftsmen and the general work on the job to be able to pick out something which is extra good and say "I like the way you have done this; what about laying the rest of the bricks like that?" instead of saying "I don't know, but it all looks pretty shoddy to me." There are many craftsmen who will do better work if praised for doing something good.

I was very pleased to hear Mr. Woodbine Parish say that five years was too long a time to spend in an architectural school. I have been saying that ever since I was a student in the School. I stood it for three years and then went away. It was not that the staff were as bad as I thought they might be—some of them, I think now, were quite wise—but I felt that I had been long enough on the drawing-board, and so I went away for a year and worked in an office and saw one building completed and another started, after which I came back, feeling better-tempered, and did another year. I do not think that to spend five years on a drawing-board is a sensible way of learning to build. I believe that with good organization and teaching the theoretical part of the job could be taught in three years, and I hope that it will not be long before we are able to do something on those lines.

MR. ARTHUR KENYON: I confess to being a little disappointed. We have heard Mr. Anderson's Presidential Address, and we have heard Mr. Woodbine Parish and a number of other people say that we ought to get together and work together more amicably, but nothing ever seems to be done. I had hoped to hear—perhaps we may do so later on—*how* Mr. Woodbine Parish suggests that we should get together. It is often said that the architect and the builder should discuss their problems at an early stage of the job, so that the architect's ideas are thought out not only by him but by the builder, and then the work will be very much easier, but how are we to do that?

Mr. Parish has mentioned the tendering system. So long as that exists, we cannot get in touch with any builder or subcontractor until we have finished our drawings and all our work. If we are to get together we must change the whole of that system, and I had hoped that Mr. Parish would give us some idea of how he thought we should meet each other to settle our various problems. At present we grumble at each other very much more than we did before the war.

I should like to see builders, architects, surveyors and operatives getting together to work as a team, but can anyone suggest how it should be done? How are we to change the tendering system and get together at an earlier stage? We are all trying hard but we are not getting together, and I as an architect seem to have to carry more burdens, and more unnecessary burdens, than ever before.

On my jobs I try to have a big site office, with drawings and perspectives coloured up so that everybody can see them, and I ask the clerk of works and the foreman to bring the men in and explain what we are trying to do. We want to make the craftsmen feel that they are part of the show. They do not always respond, but it will help if we can have an opportunity of explaining to the operatives what they are doing. I have been told that it is no good doing that, and that they are not interested, but let us at any rate try to interest them.

MR. MICHAEL PATTRICK: The training of architects and builders together has often been suggested. I have often heard it said, when this subject has been discussed, that there is no point in training the builder in the first part of the architect's training, but that on certain structural problems they might have joint lectures, and perhaps towards the end of their course they could work on similar problems.

I disagree entirely. I do not think that that is what should be done if these two can be brought together. It is in the first and second years that the whole basis of the architect's training is unfolded, and it is then that the two should be brought together. We try here to train people in logical thinking, and Mr. Woodbine Parish will agree that nothing increases builders' profits more than logical thinking. It is the basis not only of architecture but of all industry.

I have on a few jobs talked to the apprentices. I did not get very much response, but I do not get very much response in talking to some students. On one occasion I talked to an apprentice late in the evening after all the men had gone. His duty, apparently, was to clean up the concrete and tip the remainder of it into the mass foundation. He had a large barrowful which he wheeled to the end of the plank, and he gave it such a tip that the barrow went in with the concrete. I asked him what he was going to do, and he replied "I think I will tamp it in." However, he did not do so and I helped him to pull it out. I should welcome in Mr. Parish's reply some concrete suggestions. That is the next step. We are all agreed on what to do; now let us see how to do it.

MR. AUSTIN-SMITH: One reason why we cannot get together is that the client wants to get a number of tenders. The architect does not like to say "You should go to Messrs. So-and-so," because he feels that that is unprofessional and that the client will think he wants a rake-off.

MR. FELLO ATKINSON: How a designer and contractors got together in spite of the client was seen in the case of the Crystal Palace, where the insertion by Henry Cole of a clause in the invitation to tender for the original design that any alternative method of construction would be considered gave the opportunity for Paxton to get together with his contractors, Fox and Henderson, to put in a scheme, by collaborating from the working drawing stage to produce a scheme which came out so fantastically lower than any other that it could not but be accepted. It would have been considered extremely unethical by the architectural profession, and the fact that Paxton was not a member of the profession may have helped him; had he been a member of the R.I.B.A. he would probably have been thrown out. The building was erected in four months at a cost of a penny per cubic foot, which makes one think!

MR. N. S. FARROW: In many cases civil engineering students spend a number of years on the constructional side and derive tremendous advantage by seeing for themselves what happens there. In addition to that, the civil engineering contracting firms have the even greater advantage of having professional people in their ranks, which raises the tone of the industry. If we could have a greater interchange between the professional and the commercial sides we should get nearer to our goal.

MR. L. J. HOLLOWAY: I should like to take that idea a little further and make the concrete suggestion that the architectural profession should consider taking up something equivalent to Part C of the A.M.I.C.E., where a man cannot get his Associate Membership until he has done two years practical work with a contractor and written a thesis at the end of his experience. If it were necessary for architectural students to serve for two years in the building industry before getting their Associateship we should immediately start to get a much closer understanding between the architectural profession and the commercial side of the industry. Architectural students would see the job from a different angle from the one with which they come on the sites at present, as young architectural Associates with the full backing of their architectural employers. They would see the difficulties which some of the instructions which they issue get us into, and they would get much closer to the craft side of the industry by constant contact with the men on the site.

MR. PETER TRENCH: Those who visited the U.S.A. and afterwards wrote a report on the building industry there make a very pointed remark about the status of the industry in the United States. The American bricklayer earns 16s an hour and goes to work in his car. The building industry is *the* big industry of the United States, whereas over here coal mining and textiles come in front of it, and in fact the building industry is fairly low down in the list. One answer to our problem is to get to the position which the Americans have reached.

As far as the point raised by Mr. Bran-

don-Jones and Mr. Kenyon is concerned, my answer is that you should have the courage of your convictions. If you think that it is right that you should have a builder in at the beginning, get a builder in at the beginning. If the client makes difficulties, it comes back again to a question of the status of the building industry. You architects should not be in a position to be run by your clients; you should run your clients and make them realize that not only have you something to contribute but you know more than they do, and if they do not take your advice the building will cost them twice as much; and you can then tell them which builder you want to use.

To Mr. Pattrick I would say that the apprentice who put his barrow in the concrete was probably most unwise to pull it out, because it was probably a question of reinforcement.

MR. A. POTTS: I should like to support the point made by Mr. Trench. We talk about professional status, but surely our overriding professional duty is to give the client unbiased advice, and if he will benefit by our doing what is suggested rather than by going out to tender we ought to tell him so. No architect is really convinced, however, that the client will get a cheaper job in that way; we pay lip service to the idea, but we are not convinced.

MR. D. A. G. REID: I suppose that I must pose as a professional educationist. I am not concerned so much with the courses for apprentices as with the courses for the young men to whom Mr. Woodbine Parish particularly referred in connection with the management function, the young men who will be the executives of the future. If we are to provide a suitable course for them it must be a mind stretching course and train them, as Mr. Pattrick says, in logical thinking. The problem is to devise a building course of that type.

If building were an applied science it would be easy, but building is not an applied science; in spite of thirty years of most devoted building research, building remains over considerable sections of its activity an empirical technology, and empirical technologies, as the universities of this country are quick to point out, do not make for the single academic discipline which makes a good course.

Our main problem now is to find the discipline to make a building course, and I believe that that is to be done by having the right sort of regard for the difficulty of the management function. We are, however, so obsessed with management as an exercise of a mature mind that we are very apt to go quite wrong in relating management problems to courses at the undergraduate level, and until we get the right slant on the problems of the management function our building courses will, I think, continue to have certain weaknesses. I believe that that is the most important trend in building education to-day, the trend towards the development of suitable courses of this type. If that type of course can be found it will produce the right sort of person.

I think that if building courses can be developed in that way it may be possible for the architecture courses to learn something from them. It occurs to me, having regard to Mr. Brandon-Jones's personal experience of his training, and having regard to what has been said about three years and about architects gaining experience of industry, that there may be something to be said for architects spending six months in a college and six months in industry.

THE PRESIDENT: Mr. Reid has brought us back to the subject of this evening, which is the trend of education in the building industry. What has kept cropping up is something in which we are very interested, the relationship of builder, client and architect, and tendering systems. These are fundamental matters. The Simon Report, the Productivity Report, the Working Party Report and other documents of that nature all say the same thing, that we have to get together and be more efficient.

MR. WOODBINE PARISH: Mr. Brandon-Jones referred to the question of the initial capital saving. I believe that architects have an important part to play in educating their clients to the belief that the capital outlay is not of such enormous importance as they may think; it is the annual expenditure on maintenance that matters, a continuing liability which goes on throughout the life of the building.

On this question of architects and master builders being educated together . . . I do not know that it is of fundamental importance that they should be taught concurrently, but they should be taught together, within the same building, though not taking the same course. That will give an opportunity, by the students' union and other facilities, for mixing together and getting to know each other, thus establishing a far closer bond of contact and confidence in one another than is possible at the moment.

Mr. Kenyon dealt with the question of how we are to bring together the master builders, the architects, the quantity surveyors and everybody else. I believe that the real answer lies in our setting down all the functions necessary to produce a building and allocating clearly where the responsibilities lie, and ensuring that each section of the industry is fully trained to undertake their respective function. I know that master builders have innumerable failings, and I am painfully aware that architects may have their failings too. I know certain architects for whom I can discount a tender by 5 per cent, because their commercial or administrative arrangements are such that I know that I shall get prompt instructions and the architect will always be a few weeks ahead with information and drawings. I also know the architects who will not give an extension of time although one may have not had half the details of the job and the contract time has gone by some weeks.

I agree with everything that Mr. Trench said. You as architects must discipline your building owners much better.

The President asked how the results of technical research got down to the man who was actually doing the job. On the south side of Bedford Square we have inaugurated during the last year or so a system of technical information, in conjunction with the Ministry of Works and the Building Research Station, and we are surprised at the success which we have achieved. There is a psychological difficulty, because it is unlikely that a foreman would admit that he does not know the answer to a particular problem, and it is even more galling to be told to ring up a Government Department and find out the answer. There may be some architects who feel that after five years' training and considerable practical experience they should know the answer. It is embarrassing to say "This is a simple matter, but in fact I do not know the answer." If, however, you can break through that "sound barrier," you will realize that the complexity of the technical problem facing the industry is so enormous that we need a service to which we can go for the necessary information, and the service which is provided is excellent.

International Union of Architects

Third Assembly and Congress

The Third Assembly and Congress of the International Union of Architects will take place at Lisbon from September 21-28 this year. This was decided by the I.U.A.'s Executive Committee at a meeting held in Paris earlier this month.

Although the United Kingdom Committee of the Union have not yet appointed any delegates, it is hoped in Paris that Mr. C. H. Aslin will act as Chairman of the section discussing School Construction, and that Professor Gordon Stephenson and Mr. F. R. S. Yorke will be rapporteurs of the working groups dealing respectively with Town Planning and Industrialization of Building.

According to provisional plans (which have not yet been finally approved), there will be eight working groups, organized on the following lines:—

1. *The Formation of the Architect.*
   Theme: The Qualification of the Architect.
2. *The Position of the Architect in the Community.*
   Theme: The Status of the Architect.
3. *The Relationship between the Architect and the Engineer.*
   Discussion on the respective roles of the Architect and the Engineer and on their collaboration.
4. *The Synthesis of the Plastic Arts.*
   Discussion on the collaboration between Architects and Artists (painters, sculptors, interior decorators).
5. *Town Planning.*
   Theme (a): The Status of Town Planning.
   Theme (b): Standardization of Symbols used in Town Planning.
6. *Dwellings.*
   Theme: The Housing Requirements of a Family.
   (a) Shelter.
   (b) Housing.
   (c) Space-economy relations.
7. *School Construction.*
   Theme: How to satisfy the urgent need for School Buildings.
8. *Industrialization.*
   Theme (a): The Relationship between Architects and Contractors.
   Theme (b): Modular Co-ordination.

The Secretary to the United Kingdom Committee of the International Union of Architects is J. F. Cullis.

Information Digest

OFFICIAL PUBLICATIONS

● **British Standard Codes of Practice.** Issued by British Standard Institution, 24/28, Victoria Street, S.W.1. Abbey 3333.
British Standard Code of Practice C.P.310, 1952. Water Supply. Price 6/- post free.

This code deals with water supplies to all types of buildings, either directly from wells, boreholes, rivers and similar natural sources, or through the agency of a Public Water Undertaking. The Code strongly recommends that, in all but the simplest cases of connection to a Water Undertaking's mains, expert advice should be obtained when choosing the source of supply and planning the system. Detailed information is given as to the preliminary steps required, and the collaboration necessary before embarking on a scheme of water supply noting the differences of procedure when the water is obtained directly from natural sources or through a Public Water Undertaking. A full list of British Standards is included which covers all the materials, appliances and components used in water supply work. The design section of this Code is divided into five parts. The first part deals with "Supply," in which is discussed at some length all the sources of water, e.g., the subsoil, deep wells, artesian wells, springs, rivers, roofs, etc., together with notes on quality and sampling. The next part deals with "Treatment" and includes information on methods of filtration, sterilization and softening, with recommendations as to choice of method in various circumstances. It is pointed out here, again, that water treatment is a highly specialized science, only to be undertaken under the guidance of experienced water engineers or analysts. The rest of the "Design" section, under the headings "Conveyance," "Storage" and "Fittings and Appliances," deals very fully with the mains, service pipes, tanks, cisterns and other fittings and appliances required to convey water from its place of treatment to its place of draw-off by the user.

British Standard Code of Practice C.P.327.101, 1952. Telephones and Telegraphs Public Services. Price 7/6 post free.

This Code forms part of the series dealing with telecommunication services and describes the principal telephone and telegraph systems supplied and maintained by the G.P.O. Details are included of the structural requirements to enable the apparatus to be located in the most convenient points without unsightly wiring. Private telephone systems not dealt with by the G.P.O. are covered by Code 327.102. The Code covers the services available, information concerning installation, structural accommodation, and the appendix includes diagrams showing simple wiring systems in relation to various types of telephone installation.

British Standard Code of Practice C.P.122, 1952. Walls and Partitions of Blocks and of Slabs. Price 9/-.

The Code stresses the need for the exchange of information between contracting parties and for a time schedule. It deals with blocks and slabs, mortars, permanent supports, reinforcement, scrim, damp-proof courses, flashings, air-bricks and gratings. The general considerations affecting choice of materials and their fundamental characteristics are given in some detail, covering such factors as sound-absorption, co-efficients, fire resistance gradings and thermal transmittance values. Information is provided on the mixing proportions for mortar, limitations to inter-mixing, treatment of damp-proof courses, finishing of joints, formation of vent ducts and other constructional details. The question of work on and off site is also dealt with, and some general points on inspection and testing are given. The appendices set out specifications for hydraulic quicklimes and hydrated hydraulic quick-hardening limes, and there is a number of illustrations showing methods of edge isolation, reinforcement over openings, treatment of permanent supports and various constructions of hollow glass blocks, wood-wool building slabs, anhydrite blocks and plasterboard-and-plaster.

British Standard 731 Part 1, 1952. Flexible Steel Conduit and Adaptors for the protection of electric cable. Price 2/6.

This British Standard forms part of the revision of B.S.731 issued in 1937 and forms the first of two parts covering flexible steel conduit. This revised standard provides for three types of flexible steel conduit suitable for insulated cables and for two types of adaptors. In addition to standardizing dimensions; mechanical requirements and tests for the finished conduit are specified and suitable qualities of materials are prescribed.

British Standard 1047, 1952. Air-cooled Blastfurnace Slag, Coarse Aggregate for Concrete. Price 4/-.

This standard, which was first issued as a war emergency standard, has been revised in the light of the present technique in using blastfurnace slag and to bring the methods of test into line with the recent revisions of other British Standards specifying concrete aggregates.

British Standard 1186. Part 1, 1952. Quality of Timber and Workmanship in Joinery. Part 1 Quality of Timber. Price 4/- nett.

This publication is a revision of the standard originally published in 1944 under the title Grading of Softwood joinery. The new version specifies in greater detail the quality of timber and the permissible limits for defects. Part 2 of the Standard, now in preparation, deals with workmanship for joinery and promises to be a performance standard of great value which should set the standard for similar specifications.

British Standard 1892, 1952. Gymnasium Equipment. Price 12/6.

This standard was originally issued as a Ministry of Education Standard in 1947. The new publication covers all the normal gymnasium equipment giving dimensions, materials and construction.

● **Building Research Station Digests Nos. 48 and 49.** Issued by the Building Research Station, Garston, Watford, Herts. One-Pipe (Single Stack) Plumbing for Housing. Parts 1 and 2.

These Digests deal with the application of single stack one pipe plumbing to normal housing. No. 48 deals with the principles of the system and the advantages and disadvantages, including those relating to costs and materials as compared with the conventional two pipe system. No. 49 covers the principles of design to be followed in designing the various parts of the single stack system of plumbing. The Digest points out that accurate design is of greater importance with the single pipe system than those with normal vent pipes.

● **National Building Studies.** Published by H.M.S.O. York House, Kingsway, London, W.C.1. Research Paper No. 13, Studies in Composite Construction. Part 1. Price 2/-.

This publication deals with the composite action of brick panel walls supported on reinforced concrete beams. It has been usual in designing buildings to consider the framework as bearing the loads and stresses of the building. No account has normally been taken of the stiffening effect upon the completed structure of the walls and floors and the partial rigidity of joints. These effects have now been found to increase the strength of the building as a whole. The behaviour of composite structures is complex and it is not always possible to forecast their carrying capacity. The Building Research Station is making a study of the behaviour of these structures and the present publication is the first of a series which will deal with the subject. The work described includes laboratory experiments and observations of buildings during erection and after completion. The results described in the paper are concerned only with the stiffening effect of brick walls.

Special Report No. 14. An Inquiry into Domestic Hot Water Supply in Great Britain. Part 2. Price 3/-.

This publication deals with the use of water heating appliances in Summer and the relation between the usage of hot water and the appliances available.

● **Post War Building Studies No. 29.** Published by H.M.S.O. York House, Kingsway, London, W.C.2. Fire Grading of Buildings. Price 4 6 nett.

Fire grading of buildings now published in the Ministry of Works series of Post-War Building Studies is a report by a Joint Committee of the building Research Board (Department of Scientific and Industrial Research), and of the Fire Offices' Committee. It continues the investigations published in 1945 as "Part I," and embodies "Parts II, III and IV, which discuss: Equipment in buildings for detection and fire fighting; Precautions relating to safety of occupants; and Risks from chimneys, flue pipes and hearths." In Part II general guidance is given to building designers on systems for detecting and giving warning of fire, manual and automatic extinguishing equipment for dealing with fires at inception, and means to assist the public fire service. Part III is divided into two sections, the first dealing with building construction as it affects the safety of occupants, the second with means of escape. Recommendations are made for permissible "population densities" in theatres or cinemas, dance halls, restaurants, retail shops and department stores (allowance is made for crowded areas such as bargain basements or popular counters at Christmas or sales-times), offices and factories. Structural precautions to ensure adequate safety standards for the occupants of residential buildings (blocks of flats, hotels, institutions), as well as assembly buildings and industrial premises, are considered. In Part IV recommendations are made on such matters as unprotected flue pipes, height of chimney outlets above the roof, and the dimensions of hearths and kerbs. The Committee has again considered wood shingle roofs, at the request of the Timber Development Association, but it is unable to make any substantial change from its recommendations in Part I. Nor was it found possible, after studying specially arranged demonstrations, to recommend transparent plastics as alternatives to glass in roofs or windows.

● **Building Research 1951.** Published by H.M.S.O. York House, Kingsway, W.C.2. Price 4 6.

This annual publication in the form of the report of the Director of Building Research for 1951 covers the whole field of work carried out by the Building Research Station during that period. It is a document well worth studying and it not only describes the major activities during 1951, but provides a considerable number of illustrations in the form of photographs.

● **Report of the Forest Products Research Board 1951.** Published by H.M.S.O. York House, Kingsway, C.W.2. Price 3 -.

This publication includes the report of the Director of the Forest Research Board and an illustrated survey of the work of the Boards Research Stations during 1951.

PROFESSIONAL AND TRADE ASSOCIATION PUBLICATIONS

● **Devon & Cornwall Architectural Society Handbook 1952-53.** Truro Branch. Hon. Secretary, J. K. Crowther, F.R.I.B.A. Cornel, Tremorvah, Truro, Cornwall. Price unstated.

This year book includes a list of members of the Truro branch, the secretary's report, information and photographs of some of the recent work in the area, notes on interesting churches and a long article on the architect, his work and training, together with a considerable amount of useful technical data. The whole publication is extremely well produced with a practical transparent plastic dust cover and an exceptionally well designed jacket. The Society is to be congratulated on the standard of this publication.

● **Sutton Dwellings Trust Annual Report 1951.** Published by Sutton Dwellings Trust, Victoria House, Southampton Row, W.C.1.

This Trust has existed since 1900 for the provision of model low-rented dwellings for the occupation by the poor of London and other places of England. Since that date the Trust has provided nearly 8,000 dwellings in various parts of the country. Unfortunately however, the illustrations in the report do not reveal any notable contribution to low cost domestic architecture.

● **Manchester Municipal College of Technology Jubilee 1902-1952.** Published by Manchester Municipal College of Technology, Sackville Street, Manchester, 1. Price unstated.

This College has issued a commemorative booklet following its 50 years of existence. This booklet traces the rise of the college from its formal opening in 1902 to the present day. The account is illustrated by photographs and drawings and will no doubt be in great demand from ex-students as an interesting souvenir.

● **The York Civic Trust,** St. Anthony's Hall, Peaseholme Green, York. Telephone York 54711. Annual Report for 1952 with details of two courses on the Protection and Repair of Ancient Buildings to be held at Easter 1953. All available free.

● **The Georgian Group.** 27, Grosvenor Place, London, S.W.1. Interim Report for 1952 with members list.

● **Cambridge Preservation Society.** Cambridgeshire House, 7, Hills Road, Cambridge. 23rd Annual Report and list of members with annual accounts.

● **City and Guilds of London Institute.** Gresham College, Basinghall Street, London, E.C.2. Annual Report of the Council for 1951, together with financial report and details of staff and administration.

● **The Georgian Society for East Yorkshire.** C/o Secretary, Lt. Col. R. A. Alec-Smith Winestead, Kingston-on-Hull. Annual report for 1951 and 52 including a list of members, financial statement and details of Georgian buildings of interest in the area.

● **Solid Fuel Burning Appliances, Key List Booklet.** Published by The Hardware Trade Journal, Bouverie House, 154-160, Fleet Street, E.C.4. Central 3212. Price 5/-.

This booklet lists the solid fuel burning appliances available for general use under various headings, and includes open fires, stoves, domestic boilers, cookers and combustion grates. A complete list of manufacturers is included, together with a series of articles on heating systems for small houses, a list of recommended domestic solid fuel appliances provided by the Coal Utilization Council, and a list of trade names. The publication is a comprehensive guide to solid fuel appliances and should be of considerable value to architects concerned with large-scale housing projects. The advertisement section includes most of the well-known manufacturers of appliances.

● **Zinc Bulletin No. 10.** Issued by Z.D.A., Lincoln House, Turl Street, Oxford. Oxford 47988. Free.

The Zinc Bulletin No. 10 includes an article on the use of hot dip galvanized cladding at the Margam Steel Works, and information Sheet No. 10 on Zinc weatherings. These detail sheets are exceptionally well presented and contain much valuable information on the use of zinc weatherings for cills and copings. The supply position of zinc is now improved considerably, and all restrictions on its use in the United Kingdom have been removed. The Association points out that prices are falling considerably and it is now one of the cheapest non-ferrous metals.

● **Application of Mastic Asphalte.** Issued by the Natural Asphalte Mine Owners & Manufacturers Council. 94/98, Petty France, Westminster, S.W.1. Abbey 1010. Free.

These two booklets one dealing with damp proof coursing and tanking and the other roofing, provide a useful digest of asphalte technique as applied to modern buildings. The publications consist of a large number of diagrams showing recommended treatments in the case of particular details, and both publications should form a useful reference in relation to the use of mastic asphalte.

● **Electric Kitchen Planning.** Issued by British Electrica Development Association, 2, Savoy Hill, W.C.2. Temple Bar 9434. Free.

This brochure consists of a series of planned arrangements for electric kitchens for houses of various sizes, together with photographs showing the disposition of the various units within the kitchen. Items such as lighting, the provision of electric power, etc., are considered and the booklet generally presents in a compact form a useful summary of the important points in kitchen planning.

● **Cooking in the new Homes.** Issued by the Gas Council, 1, Grosvenor Place, S.W.1. Sloane 4554. Free.

This publication is the Gas Industries version of the previously mentioned publication, but does not provide the

detailed information set out in the electrical booklet. The gas publication is primarily a propaganda brochure illustrating the large number of housing schemes of all types which use gas for cooking. Many of the kitchen units published do not appear to have been planned at all, their only merit being the fact that they include gas cookers. Amongst the better known schemes included which do not come into this category are the Pimlico Flats and the Spa Green Flats at Finsbury.

● **The advantages of solid fuel for water heating.** Issued by the Coal Utilization Council, 3, Upper Belgrave Street, S.W.1. Free.

This six-page leaflet sets out the advantages of the use of solid fuel for water heating for domestic purposes and maintains that solid fuel provides the most economical method of water heating. Much of the information included has been based on the study made by the Building Research Station on domestic water heating in relation to the experimental houses at Garston.

● **Plumbing for Hospitals.** Issued by the Lead Industries Development Council, 90, Ebury Street, W.1. Sloane 0474. Free.

This bulletin sets out the advantages of lead for hospital plumbing and provides a considerable number of excellent detailed drawings showing typical connections in lead for the various hospital services. The material is presented in a straight-forward manner and provides considerable reference information.

● **List of tested and approved domestic gas appliances.** Issued by the Gas Council, 1, Grosvenor Place, S.W.1. Free.

This list No. 2 cancels list No. 1 of September, 1951, and includes all the domestic gas appliances which have been tested in the Gas Council's laboratories. The Ministry of Housing and Local Government recommends that any gas appliances installed in houses should be selected from those contained in this list.

● **L.M.B.A. Technical Information Service Bulletin No. 2.** Issued by London Master Builders Association, 47, Bedford Square, W.C.1. Free.

Bulletin No. 2 is concerned with floor finishes and deals with granolithic concrete, magnesium Oxychloride floorings and miscellaneous materials and problems such as cork and linoleum.

● **Guide to the excess profits levy.** Issued by the Federation of British Industries, 21, Tothill Street, S.W.1. Price 1/-.

This booklet explains the excess profits levy introduced in the Budget statement of March, 1952, and enacted by the Finance Act, 1952. The booklet covers a general outline of the provisions of the Act.

● **Light-weight metal fixing systems.** Issued by the Metal Fixing Association, 32, Queen Anne Street, Cavendish Square, London, W.1. Langham 7616. Free.

This publication is a Code of Practice covering the light-weight metal fixing systems of building linings and ceilings, and has been drawn up by the Metal Fixing Association. The Code lays down minimum standards of metal components, insulating fibre boards, anti-corrosion protection and describes in detail a specification for fixing linings and ceilings. It also sets out data suggested for specifications and enquiries for quotations.

● **The British Journal of Industrial Safety.** Issued by Royal Society of Prevention of Accidents. 52, Grosvenor Gardens, S.W.1. Price unstated.

The Autumn issue of this journal includes an article by R. H. Payne on Industrial Accidents, and one by A. Tayler on Handling and Lifting Problems. Both of these articles should be of interest to architects designing industrial buildings as many of the causes of accidents in factories can be avoided if the building is properly designed.

TRADE PUBLICATIONS

● **Handbook for Construction Engineers.** Published by Dorman Long & Co., Middlesbrough. Price unstated.

Messrs. Dorman Long have now published a new edition of their well-known structural engineers handbook. This is an invaluable publication which will be widely used by both architects and engineers. It contains all the information necessary in connection with the design of structural steelwork and details of the products and manufacture of Dorman Long. The book is beautifully produced and its reputation is so well known that the new edition can be thoroughly recommended without any further comment. The information included has been brought up to date in relation to British Standard Specifications, Codes of Practice and other regulations.

● **Building Topics.** Issued by Tretol Ltd., 12 14, North End Road, N.W.11. Speedwell 4621. Free.

This publication is the house journal of Tretol, Ltd., and the winter issue includes an article on Damp Proof Courses in Parapet Walls, one on Chlorinated Rubber Corrosion Resistant Coats and one on Permeability of Paints in building construction.

● **International Lighting Review.** Issued by Philips Electrical Ltd., Century House, Shaftesbury Avenue, London, W.C.2. Free.

This publication which is printed in Holland by the Philips Organization is of a very high standard in both content and production. The articles which cover a wide range are illustrated by excellent photographs and include reviews of several new buildings on the Continent, together with a comprehensive article on the lighting of the new House of Commons. Of particular interest is the article on the new Lighting Centre in the Philips factory at Eindhoven where various types of lighting arrangement can be studied for various purposes. In particular the design of the fittings which can be seen in many of the photographs is to be warmly commended.

● **Use of Mastics in Building.** Issued by Secomastic Ltd., 15, Upper Grosvenor Street, Park Lane, W.1. Mayfair 4027. Free.

This publication illustrates the use of Secomastic in building work and contains a considerable amount of useful data mainly presented in the form of diagrams and photographs. Secomastic has been used for buildings as widely differing as the Uni Seco temporary housing and the new House of Commons.

● **Progress of Glass.** Issued by Pilkingtons Bros. Ltd., St. Helens, Lancs. Free.

Progress in Glass is a souvenir of the Festival of Britain and in particular of the South Bank Exhibition, and shows in pictorial form the use of glass in several of the more important buildings on the South Bank. Reference is made to the largest polished plate glass window in the world which was installed in the Power and Production Pavilion and photographs show the manufacture, transporting and fixing of this sheet of glass, including its final cutting up into small pieces when it was returned to St. Helens after the exhibition. Among the buildings included are the Royal Festival Hall and the publication is well worth while for the photographs of the interior of this building alone, and does in fact form a very pleasant reminder of some of the South Bank during 1951.

● **Ad Rem.** Issued by the Butterley Company Ltd., 20, Ashley Place, Victoria, S.W.1. Victoria 8023. Free.

This is the house journal of a firm manufacturing cranes, lifting appliances, agricultural machinery and other engineering goods. The contents of the journal are primarily of interest to people associated with that company.

● **Cerreen Satin Emulsion Paint.** Issued by Cellon Ltd., Kingston-on-Thames, Surrey, Kingston 1234. Free.

This leaflet describes a new satin emulsion paint produced by Cellon, Ltd., which the makers claim dries within 2-3 hours, requires no special primer, can be washed down after 48 hours and is available in a variety of pastel shades.

● **Acrow Review.** Issued by Acrow Engineers Ltd., South Wharf, Paddington, London, W.2. Free.

Details are given in this publication of the basic elements of Acrow steel formwork together with a number of instances where Acrow products have been used in various countries. With the shortage of timber for shuttering the necessity for adaptable metal shuttering is greater than ever, and the Acrow system appears to provide the flexibility needed for shuttering in modern reinforced concrete work.

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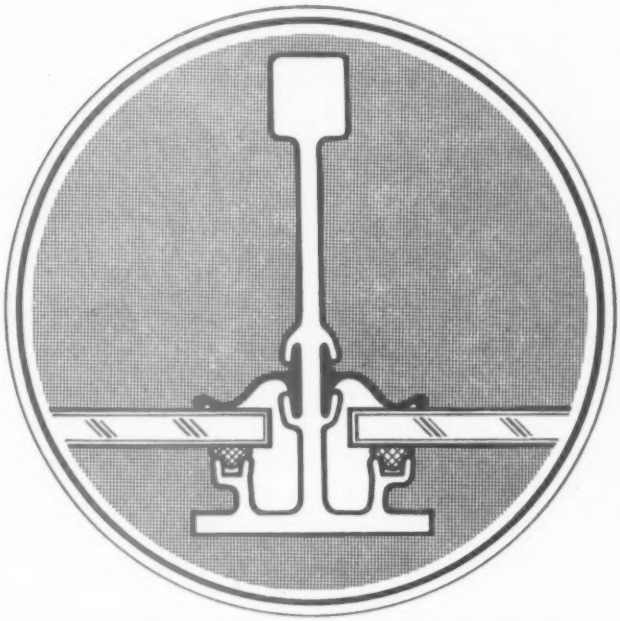

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POINTS FROM PAPERS

THE WATER PROOFING OF CONCRETE STRUCTURES

Extracts from a Paper given by ISAAC HOPKINS, M.S.E., M.I.Struct.E., A.I.S.E., at The Institution of Sanitary Engineers on January 13.

Design

FROM experience in structural investigations I feel that, even to-day, it is not fully realized and appreciated what effect the design has upon the ultimate result in the form of the completed structure. I am referring mainly to underground construction, which is liable to be subjected to ground water pressure.

If the designer gave more attention to the matter of soil mechanics, site conditions, and the practical limits concerned, I feel that a good deal of the structural defects which I have personally investigated could have been eliminated to a very large degree.

Construction

Normally the mixing of concrete is taken as being of an elementary character. This idea is fatal, and I have no doubt is the cause of many failures in concreting work. Concrete mixing and uses is a science and every detail has to be taken into account in order to produce the best results.

The first essential is to see that the sand and aggregate are of the best qualities, accurately proportioned with the cement, thoroughly mixed and well placed. Secondly, and far more important, is to see that the concrete is not disturbed in any shape or form after the initial set has occurred, and this is normally taken as being in about 30 minutes after mixing, and which gives ample time for placing and so on. The matter of disturbing the setting process is generally overlooked and has been the means of causing many failures as far as concreting work is concerned.

Methods of Waterproofing

(1) Asphaltic or sheeting membranes.
(2) The usage of waterproofers in the concrete.
(3) Plain concrete.
(4) Waterproof renderings.
(5) Pumping.
(6) Colloidal concrete.
(7) Pressure grouting.

The first method has been used for many years and is commonly used to-day, but is being replaced to a very large extent by the other methods enumerated.

The membranes have to be loaded against water pressure in the case of both walls and floors, with the result that when the work is completed means of access is eliminated. If a fault develops due to settlement or some other factor it is extremely difficult, if not impossible, to find the location of the fault. I feel that the design and layout are very often at fault in being unnecessarily complicated, and could have been simplified, thereby giving the operator a much better opportunity of making the membrane continuous.

Another factor is that during the application of the membranes, the ground water should be kept well down by means of pumping operations, so as to give dry conditions, which are essential.

There seems to be a conception that if the lower foundation concrete is correctly designed, that the membranes can be laid on this, and do not require a loading concrete sufficiently strong to counteract the water pressure. I have seen many faults develop because of this, it not being realized that the ground water can develop pressure between the lower slab and the membrane, thus lifting the loading concrete.

(2) Waterproofed Concrete

There are numerous liquids, pastes and powders which can be added to the mixing water for waterproofing concrete.

There are also cements obtainable in which the waterproofing medium is integral with them. It is a common fallacy that if these mediums are used, an impervious concrete is obtained, even though normal methods are used.

Even though a waterproofing medium is used, first-class methods should be applied, it is not sufficiently realized that waterproofed concrete is highly specialized.

The main faults are bad joints, no allowance for contraction due to seasoning, no consideration for temperature variations, and bad placing.

In the case of daywork joints, the old work should be hacked to give 100 per cent exposure of the aggregates, well cleansed, watered, and given a one inch coating of 1 to 2 mortar with the waterproofer incorporated, before the next lift is placed.

Against the possibility of contraction the small gap system is commonly used. This consists of leaving gaps 24in wide or so in the construction. These being filled in later when the major contraction has occurred in the main structure. Surface treatment at the gap should be as in construction joint practice.

Another deterrent against contraction is the use of plasticizers which tend to reduce the water content whilst retaining the same workability. I may add that most waterproofing additives act as plasticizers, or lubricants.

The basic factor is to keep the water content to a minimum, by correct proportioning, adequate mixing, and final water seasoning of the work, for at least 14 days after completion, the longer the better.

(3) Plain Concrete

The question as to whether plain concrete can be made waterproof is highly disputable.

Many of our most eminent engineers say it has and can be done.

I read in a technical book on concrete some years ago that the waterproofing of concrete structures is a question of making construction joints watertight.

This is true, because it is found that making a concrete mass in strict accordance with the best standard practice results in it being impervious.

Success with plain concrete depends on, first, the materials and methods used, and secondly, a degree of porosity in the aggregate which gives a better bond with the mortar.

I have found that with a completely impervious aggregate the bond is not perfect, resulting in water travelling between the surface of the aggregate and the mortar.

(4) Waterproofed Rendering

This method is becoming increasingly popular. It has two fundamental attributes.

First. The structure itself can be built by normal methods, without specialized operatives.

Secondly. Any faults, due to settlement or temperature effects, can be located and remedied. In the case of concrete construction it is extremely difficult, if not impossible, to control each of the various operations, whereas, with renderings the work can be done by a group of highly trained men.

The waterproofing medium used is the same as in concrete, but proportions may be different The methods used are as important, if not *more* important, than the additives, in the form of liquids, powders, or special cements.

The primary factor is to obtain a good bond between the rendering and the structure. This can be done by adequate preparation and correct method of applying the renderings; with lapping, the use of gaps, and so on.

The grading and type of sand, and thorough mixing, are important, with special care given to the water seasoning of the work.

With this method the question of continuity to form the internal tanking may present some difficulty.

I would like to emphasize here that renderings are integral with the structure, so that the necessary precautions in designing against structural movement are vital.

(5) Pumping

A system of internal pumping is largely used in cases where structural movement has occurred and the waterproof lining is not easily accessible.

The main objection is the question of silting, creating under-mining and possible settlement of the structure.

(6) Colloidal Concrete

We enter a new phase when we consider colloidal concrete. Much has been done and a good deal known, but there is still a wide field of research to be dealt with in its application.

Colloidally mixed, a cement mortar has attained its maximum as far as water content is concerned, and this can be proved in a practical manner quite simply. Take a bucket full of water, then a bucket full of colloidal grout. Then pour the grout slowly into the water bucket, along the edge. It will be found that the grout will displace the water without dispersal. This is an extremely important characteristic. The grout is waterproof without the addition of any agents.

The method of concrete making is to select a non-porous aggregate, place in position, then add the grout which fills in all voids and forms the mass.

Its main uses are for road work, mass retaining walls, and similar construction.

I have no doubt that a concrete structure built with this system would be watertight provided the correct materials are used, and the best engineering practice observed.

(7) Pressure Grouting

This is mainly a remedial measure, and used in connection with existing structures. Its uses have been known for many years, and it is now a highly specialized system.

Primarily it consists of injecting a prepared cement by pressure to the outside of

underground concrete construction, also, in cases, into the construction itself.

This fills any cavities or any voids which may be present, preventing the entry of ground water.

Its use has been extremely successful, but, as in the case of any specialized work, long experience is required as there are so many factors to be taken into consideration.

Summarizing These Methods

From my experience a balanced application of systems two and four is the most easily applicable, and the most economical.

The following fundamentals represent the case for these systems.

(1) Ease of application, and more continuity of construction.
(2) Less excavation, and economy on pumping costs.
(3) Easier access to remedy defects from whatever cause they may originate.

The application of these systems must originate from the drawing board stage. Afterthoughts during construction are sometimes unavoidable, but should, and could, be eliminated, provided every phase of the problem is given adequate thought and consideration.

Rectifying Faults

The most common fault is the contraction crack, due to seasoning of the concrete.

Based on the assumption that the concrete is impervious, the procedure is either to pressure grout the crack, or cut out and reform in waterproofed concrete or rendering.

If ground water is coming through the crack, it can be dealt with by quick-setting mortar. Usually the crack is filled in solid. If, however, it is considered that further movement is suspected, an expansion joint is formed.

It will be realized, also, that access is required to the faults. This is normally the case, but sometimes machines, in the form of pumps, engines and switchgear may have been erected and cannot be removed for access purposes. In cases of this type, local or total pressure grouting is the answer.

Underwater Construction

Underwater construction in concrete has been carried out for many years. Its use has developed in recent years, due to the introduction of various types of liquid accelerators, used for mixing the concrete, or cement mortar, as the case may be. There are also types of cement suitable for underwater construction.

The main factor in connection with the liquids is that the setting can be controlled by normally altering the water additive volume.

Repairs to Concrete Structures Above Ground

Waterproofing above ground and the protection of reinforcement, are important. There are two phases:—

No. 1. Precautionary.
No. 2. Remedial.

The precautionary measures are essentially good design and first-class construction.

Good cover for the reinforcement at all points, and care in construction to see all bars are well covered and not displaced during concreting.

With regard to remedial measures the normal faults are spalling of the concrete off the bars or stirrups. The primary cause is the entry of water through the cover concrete to the reinforcement, causing rust and expansion of the steel. Following this, climatic agents take a hand. The result is local reduction of bar section, and the effect of this on the stability of the structure. In all repairs of this kind, the first essential is the correct preparation, and the bond to the existing concrete.

HIGH PADDINGTON

Extracts from a Talk given in the B.B.C. Third Programme on February 5 by

PROFESSOR W. G. HOLFORD

THE Americans have a word for them: they call them High Rise Apartments. And you can see them over there in all styles and sizes.

France has had a touch of High Rise also. Twenty years ago and more, Le Corbusier published his dream of *La Ville Radieuse*, showing a large area of the slums of Paris cleared and replanned with skyscraper offices and tall blocks of flats. And now, of course, he has just completed, at Marseilles, the first actual example of his *Unite d'Habitation*.

Shortage of land was not the only reason—or even the chief reason—that caused these dwellings to rise vertically instead of spreading horizontally. But in Britain, quite recently, land shortage has been more than a contributory cause of the appearance of high density housing, including "point blocks" of 11 floors at Roehampton, cliff-like slabs in Holborn and Finsbury, and a single nine-floored tower —The Lawn—in the New Town of Harlow.

The constant exhortations of Ministers to save agricultural land have in turn released the inhibitions of architects; and the more adventurous among them have produced designs which stress the third dimension.

Such a project is *High Paddington*. It is an idea, conveyed by words and drawings in recently published books and by a model. It was conceived by Patrick Horsburgh and Sergei Kadleigh—two architects to whom we owe a vote of thanks, if for nothing more than shaking us out of our semi-detached complacency.

The project shows that by convening some 18 acres of the existing goods yard behind Paddington Station with a great reinforced concrete slab, over 8,000 people could be housed in a series of apartment blocks 340 feet or over thirty stories in height.

Between the apartment blocks and the railway tracks is shown an intermediate layer, 100 feet thick, covering the entire site and proposed for use as goods depots, warehouses and car parks, and at least one big department store. And it is suggested that commercial rents for this property would help to reduce the residential rents of the flats above and thus bring them within the rent-paying capacity of the average Paddington family. The cart, so to speak, is placed above the horse.

Besides being an idea, High Paddington is also a portent. Some people will not even begin to take it seriously. But, like other social portents, the serious things about it are the conditions under which it has come into being. I do not believe that sheer shortage of land is anything more than an economic justification added to a scheme that grew from other motives.

Much more significant, surely, is the Utopian urge to reconstruct the core of the old metropolis, to bring order out of disorder, to counter sprawl by concentration, to create a symbol of efficiency—a Welfare City in a Welfare State.

Add to this the desire to exploit to the utmost our technical resources. We now know it is possible to build 400 feet high on London clay. We can light and ventilate an enormous department store artificially, and without discomfort. We can operate high-speed and automatic lifts. We can soundproof rooms. We can save all kinds of household labour by means of electric machines.

So far so good. The High Rise Cities have at least two justifications for their existence—at least on paper. They are demonstrations of technical resource—inventive, imaginative and daring. And they are also symbols of reconstruction —a series of challenges to the schools of *laissez-faire* and *make-do-and-mend*.

The real test of value, however, is whether the adventure is going to end in discovery, or whether it is just a fling. And even in the somewhat sedentary adventures of building design and town planning, the same qualities of courage and imagination can manifest themselves both in shortsighted and long-sighted policies.

In our designs for living during the past hundred years, once the effects of the industrial revolution and of population growth had been appreciated, it is fair to say that the long-sighted enterprises have made the greater and the more typical contribution to this country's development.

The objective itself can be simply stated: it is to create a type of environment which, on the practical side, combines convenience, economy and stimulation to the eye, and at the same time provides, on the psychological plane, for the maximum development of personality, both individual and social. But even now, despite the practice and teaching of men like Patrick Geddes and Raymond Unwin, despite the London plans of Patrick Abercrombie and Lord Silkin's *New Towns Act*, this objective has not been greatly achieved.

It is easy to say that such a definition is loose, inexact and, in some respects, self-contradictory. But I think most of us know well enough what we mean by a *home*, a *community* and a *city*—in the best sense of those terms —to enable us to use them as a measure of the achievement of such projects as Stuyvesant Town in New York, the Unite d'Habitation in Marseilles, and High Paddington.

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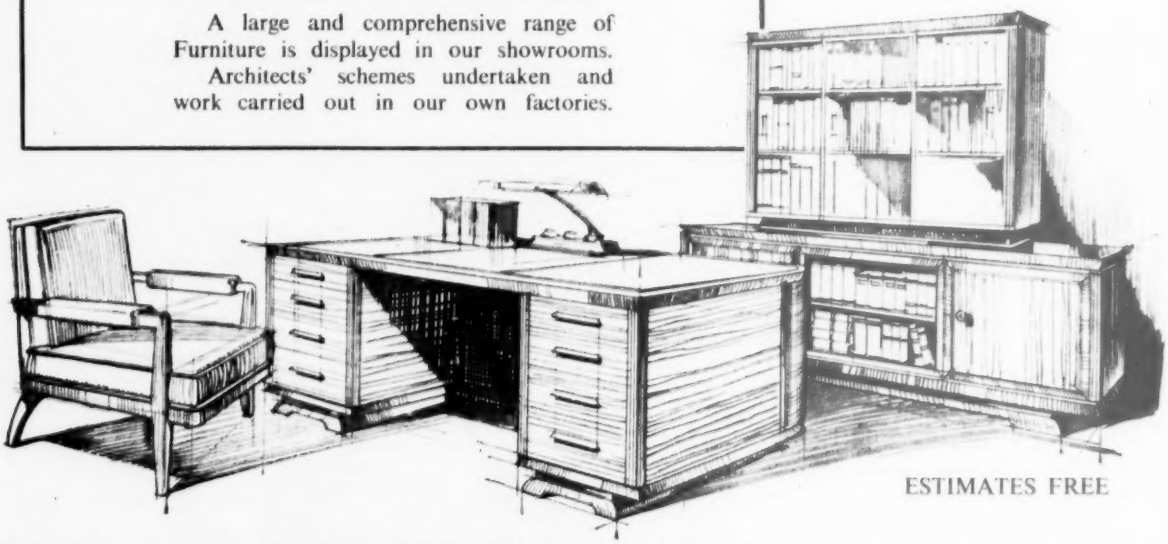

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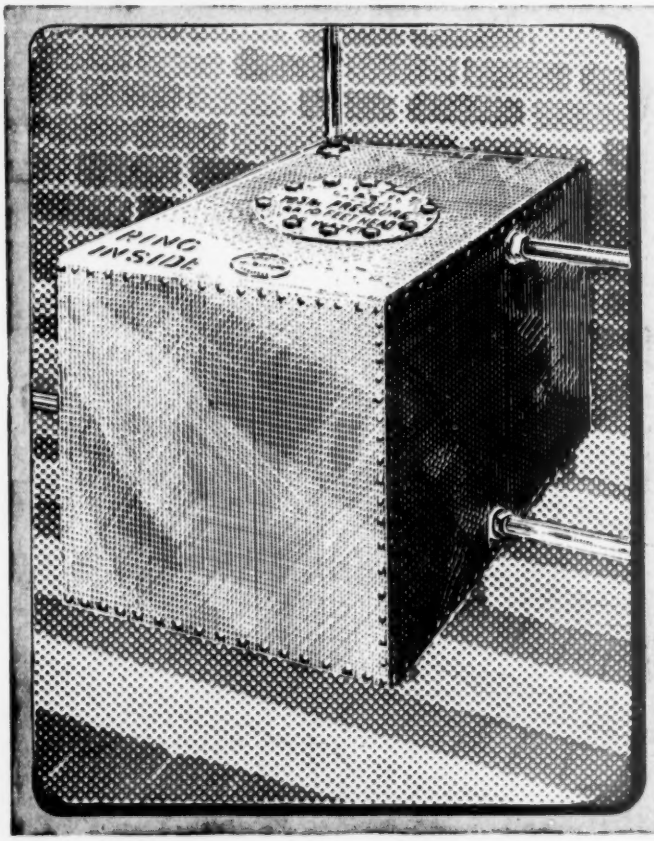

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Gas Flues

I HAVE lately been an onlooker during a very heated argument between advocates of each of the two types of concrete gas flue blocks, namely, those with spigot connections and those without. I notice that B.S. 1289 makes provision for both types without indicating a preference for either. I assume the reason for including both types is that, in spite of the fact that many knowledgeable people believe the spigot type to be the better, the plain type has been, and continues to be, so extensively used without, I believe, any known serious detrimental effects on the buildings or their occupants. I have an idea that one of the main reasons for the continued use of the plain type is that they are slightly less costly to produce. Perhaps there is also some question of patent rights attached to the spigot type. The advocate of the plain type maintained they were just as satisfactory as the spigot type and less liable to damage in transit and installation.

Personally, I have no doubt whatever that the spigot type is likely to provide a more satisfactory job as it is so important to have smooth junctions within the very small flue spaces provided by these blocks without the slightest difference in plane between adjoining blocks; these requirements cannot be achieved with certainty if there is a wide mortar joint between adjoining blocks. In the interest of making it easier for the builder to provide the necessary smooth internal flue surface, I think the B.S. should be confined to the spigot type as they are virtually self-aligning and the amount of exposed mortar of the joints inside the flue is reduced to a minimum.

The necessity of providing flues at least 2in across, and preferably rather more, and at the same time maintaining an adequate thickness of material to act as the outer wall of the block, is troublesome. The B.S. calls for the minimum wall thickness between the flue and the block face to be at least 1in, and, judging by the temperatures on the face of finished walls just above gas appliances, I feel no reduction would be wise. Even with this wall thickness there often seems to be deterioration of surface finishes which is probably due to the heat penetration. The difficulty that arises, therefore, is that single flue blocks with the desirable 2¾in wide flueways come out with an overall thickness of 4½in, which is greater than the thickness of normal brick or concrete block partitions with which they are assembled, as these are usually 4¼in or even 4in thicknesses. While ¼in difference may be very small, it can prove to be uncomfortably large to lose in the normal thicknesses of plaster as are now generally used. If the slight projections of the blocks beyond the normal wall face are picked up in the plaster thickness there is a tendency for the reduced thickness of plaster to crack or craze and for the surface finish to discolour. If, of course, these flue blocks are used as part of one half of a cavity construction, the additional thickness is normally allowed to project into the cavity, thus providing a flush face on the side to receive finishings. In many instances blocks with 2in flueways are used to avoid different planes in the wall face, but they are sometimes insufficient in flue area to meet the needs of appliances suitable for rooms having larger areas.

Code of Practice 331.104, "Flues for gas appliances," gives a useful table as guidance for the desirable minimum flue areas in relation to the cubic capacity of the room to be heated in order to achieve proper ventilation of the rooms in addition to the removal of the products of combustion. Incidentally, flues of similar areas are really necessary in rooms where electricity is used as the means of heating as they provide more satisfactory means of ventilation than do normal types of wall air bricks or ventilators. Like all pre-cast concrete products, flue blocks need to be purchased from makers of repute as poorly made blocks can be a source of nuisance. B.S. 1289 sets out fully the test requirements which should be met. It is regrettable that these units are not available covered by a B.S. Certification Mark.

While there are many materials for the construction of gas flues the choice depends very largely on the type of appliance with which they are to be used and on the extent to which appearance matters. The concrete block type forming part of the walls or partitions is usually the easiest to accommodate and the least conspicuous.

I have noticed that often insufficient attention is paid to the location of flue terminals to ensure their satisfactory operation; this is specially noticeable when gas appliances have been installed in existing buildings. I believe this is usually due to a desire to make the terminals less conspicuous as they are often far from elegant pieces of design. C.P. 331.104 gives very clear guidance as to the correct placing of terminals under various conditions both in words and by illustrations.

This code of practice also covers in adequate detail the troublesome subject of condensation in flue pipes, how to minimize it and what to do where it cannot be avoided. I think it is most important to select carefully the materials for flues especially when they are liable to heavy condensation conditions. The amount, quality and type of protection for ferrous metal flue pipes is very important as unfortunately there are pipes on the market with very poor quality vitreous enamel and galvanizing. There is a useful B.S., namely B.S. 715 covering sheet-metal flue pipes and fittings and another, B.S. 766, for bafflers which are a guide to satisfactory quality. All asbestos-cement pipes and fittings are also covered by B.S. 835 and 567; the latter is a lighter quality and should not be used for large appliances. Care is needed to joint asbestos-cement and cast-iron flue pipes properly. The socket should always be placed upwards so that condensate does not leak out from the joints. The space between the spigot and socket should be partially filled with asbestos string properly caulked into place before filling the joint with asbestos-cement jointing material. Sufficient stays and supporting brackets securely fixed to the walls are essential.

I am of the opinion that it is wise to seek the advice of the local gas supply authority at a very early stage in designing buildings which are to have gas-fired appliances, more especially water heaters and any large-scale apliances such as gas-fired heating boilers as the authority engineers can provide considerable assistance in arranging flues, air supplies, etc., in an economical manner. This is a field in which many of us have only limited specialized knowledge and the installation side seems mostly to be undertaken by the gas companies, unlike electrical installations which are more usually undertaken by independent contractors, thus an early contact is well worth while.

DUTCH UNCLE

M.O.W. LECTURES
FEBRUARY

LEWISHAM, February 16th, at 7.30 p.m.
WASTE PLUMBING FUNDAMENTALS.—Speaker: G. Lloyd Ackers, Chief Sanitary Engineer, Ministry of Works, at the South East London Technical College, Lewisham Way, Lewisham, S.E.4.

IPSWICH, February 16th, at 8 p.m.
THE THERMAL INSULATION OF BUILDINGS.—Speaker: R. R. Houston, Member of Executive Committee, Structural Insulation Association; London Manager, Fibreglass, Ltd., at the Crown and Anchor Hotel, Ipswich.

NEWCASTLE-UPON-TYNE, February 17th, at 7 p.m.
THE IMPORTANCE OF TIMBER IN BUILDING.—Speaker: J. Jowett, Regional Officer, Timber Development Association, North Eastern Region, at the Y.M.C.A., Connaught Hall, Blackett Street, Newcastle-upon-Tyne.

SLOUGH, February 17th, at 7.15 p.m.
DRY ROT.—Speaker: W. P. K. Findlay, Forest Products Research Laboratory, at the College of Further Education, William Street, Slough.

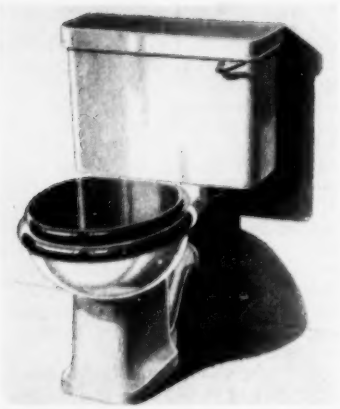
MIDDLESBROUGH, February 18th, at 7 p.m.
PRODUCTION LAYOUT FOR HOUSING.—Speaker: J. A. Kenyon, Borough Engineer and Surveyor, Middlesbrough C.B., at the Kirby Girls' Secondary Grammar School, Roman Road, Middlesbrough.

WANDSWORTH, February 18th, at 7.30 p.m.
FLOOR FINISHES.—Speaker: W. J. Warlow, Building Research Station, at the Wandsworth Technical College, Wandsworth High Street, S.W.18.

HEREFORD, February 18th, at 7.15 p.m.
THE THERMAL INSULATION OF BUILDINGS.—Speaker: J. M. Boardman, Member of Executive Committee, Structural Insulation Association; Director, Foamed Slag Producers Federation, Ltd., at the Hereford College of Further Education, Newtown Road, Hereford.

WAKEFIELD, February 18th, at 7.15 p.m.
SEWERAGE SCHEMES FOR SMALL GROUPS OF HOUSES.—Speaker: John Dossor, at the Technical College, Bell Street, Wakefield.

CHATHAM, February 18th, at 7.15 p.m.
INTRODUCTION TO SITE COSTING FOR BUILDERS.—Speaker: A. E. Chittenden, Ministry of Works, at the Technical College, High Street, Chatham.



FITTINGS
SINKS, BATHS, ETC.
C 2 10

In this close-coupled closet suite the cistern is bolted directly onto an extended shelf at the rear of the pan thus eliminating the flush pipe. The results are said to include greatly improved silence in action.

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Cistern capacity may be either 2 gallons or 2½ or 3 gallons.

Overall dimensions for the 2-gallon type unit are :— height to top of cistern from floor 32⅝in ; width of cistern 21½in ; total projection of pan from wall 28⅝in ; total projection of cistern from wall 8½in.

For the 2½- and 3-gallon types the total projection of the pan from the wall is 30½in ; the width of the cistern is 23in and the projection of the cistern from the wall is 10in.

Models are available either for wall or floor outlet.

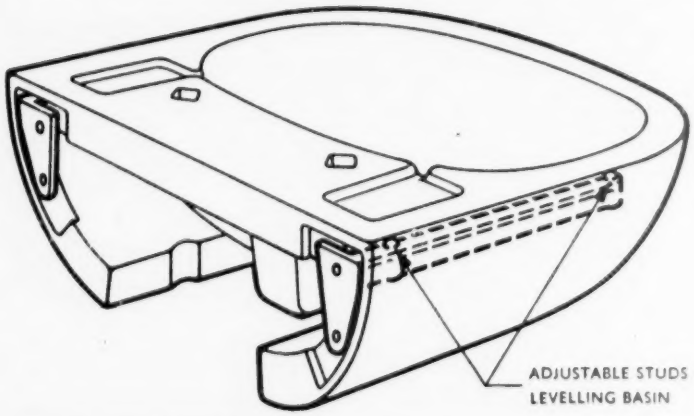
Prices complete are about £29 for the 2-gallon model in white. Coloured ware is about £6 extra.

The unit is known as the Tuscan.

FITTINGS
SINKS, BATHS, ETC.
C.2 11

From the same makers as the Tuscan suite comes the "Marnock" lavatory basin, designed for easy cleaning, strength and concealed fixing. This is shown in the line drawing below.

Note that the taps are clear of the flood level of the basin so that there can be no back siphonage and consequent risk of contaminating water supply.



SERVICES
WATER HEATING
B. 6/7

The illustration shows a recently completed installation of self contained plumbing in a block of 36 flats on the Mildenhall Road Estate at Bury St. Edmunds.

The "Thermain" storage water heater shown over the bath is gas operated and incorporates a cold water tank supply complete with ball valve control.

The unit is finished in white enamel paint and supplies hot water for bath and lavatory basin.

MOSAICS

The names and addresses of manufacturers of any item illustrated in MOSAICS, together with more detailed information relating to their products—including price and availability—will be forwarded to readers on request.

Letters should quote the serial number and be addressed to :

The Editor,
The Architect and Building News,
Dorset House,
Stamford Street, S.E.1.

Please mark the envelope MOSAICS.

INDUSTRIAL NOTES

Enough home-grown timber should be available to meet the demand for flagpoles for Coronation decorations; and it should not be necessary to import poles for this purpose. Users of poles are reminded that consumption licences are required before any home-grown softwood poles of a butt diameter of more than 3in are used; home-grown softwood poles of a butt diameter of 3in or less and hardwood poles (other than dollar material) of any butt diameter, may be used without licence. In the larger sizes home-grown softwood poles will be available ranging from 20ft to 25ft in length with a butt diameter of 5in to 6in and a top diameter of 3in to 4in, up to 40ft in length with a butt diameter of 8in and top of 4in to 5in.

In order that the requirements of home-grown softwood poles of a butt diameter of more than 3in may be known, it is essential that applications for consumption licences for these poles should be made, on form T.C.3/8/CPL, as soon as possible and in any case not later than February 21. Local Authorities in England and Wales should apply to the Ministry of Housing and Local Government (Priority Branch), Whitehall, S.W.1, and Local Authorities in Scotland to the Scottish Home Department (Room 519), St. Andrew's House, Edinburgh, 1; Nationalized Industries should apply to the Ministry from whom they obtain their softwood allocation; all other applications should be sent to the Ministry of Works Licensing Officers. Holders of licences are recommended to get in touch as soon as possible with a timber merchant or with Forestry Commission in regard to supplies.

* * *

At the fifteenth annual general meeting of the Scottish Building Centre, held in Glasgow on Thursday, January 29, 1953, Colonel G. Gardner-McLean, who was in the chair, stated that, during 1952, the many activities carried on in the centre had been successfully maintained and developed.

The chairman made the point that, in acting as a link between the manufacturer with a specialized product and a specialized knowledge, and the potential user who requires to be informed of both of these, the centre has continued to offer a valuable service both to technical and trade people and to the general public.

The extent of both public interest in the centre, and the centre's usefulness to everyone interested in building materials and appliances could be judged, the chairman pointed out, by the fact that more than 18,000 people visited the centre during the year. Also, the number of enquiries dealt with by the technical staff exceeded 9,000.

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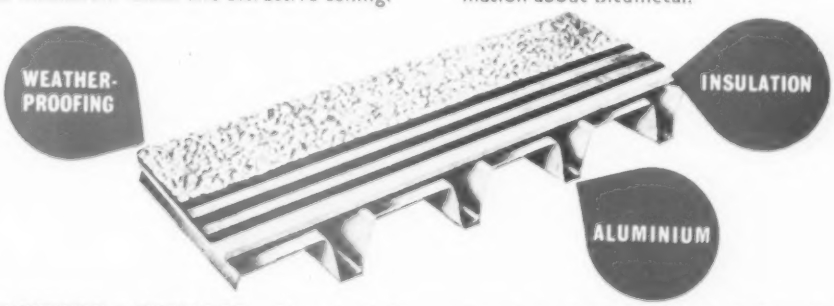

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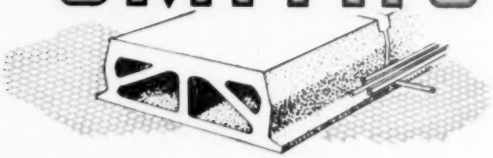

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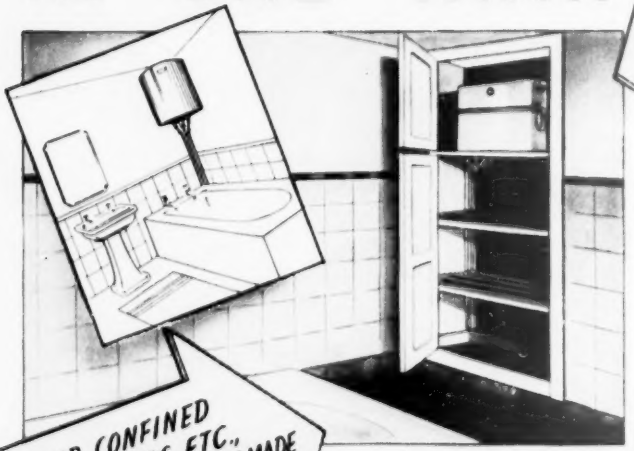

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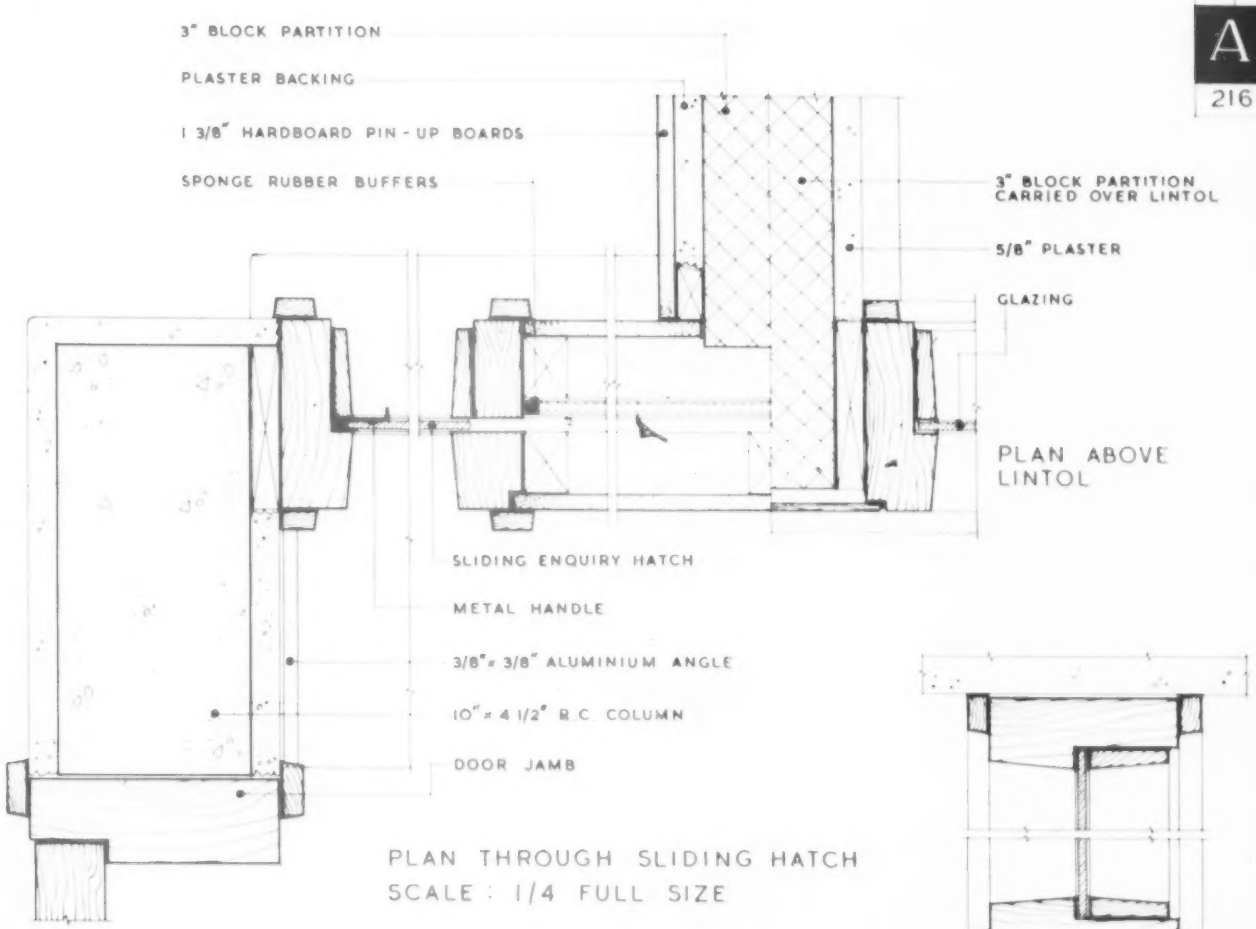
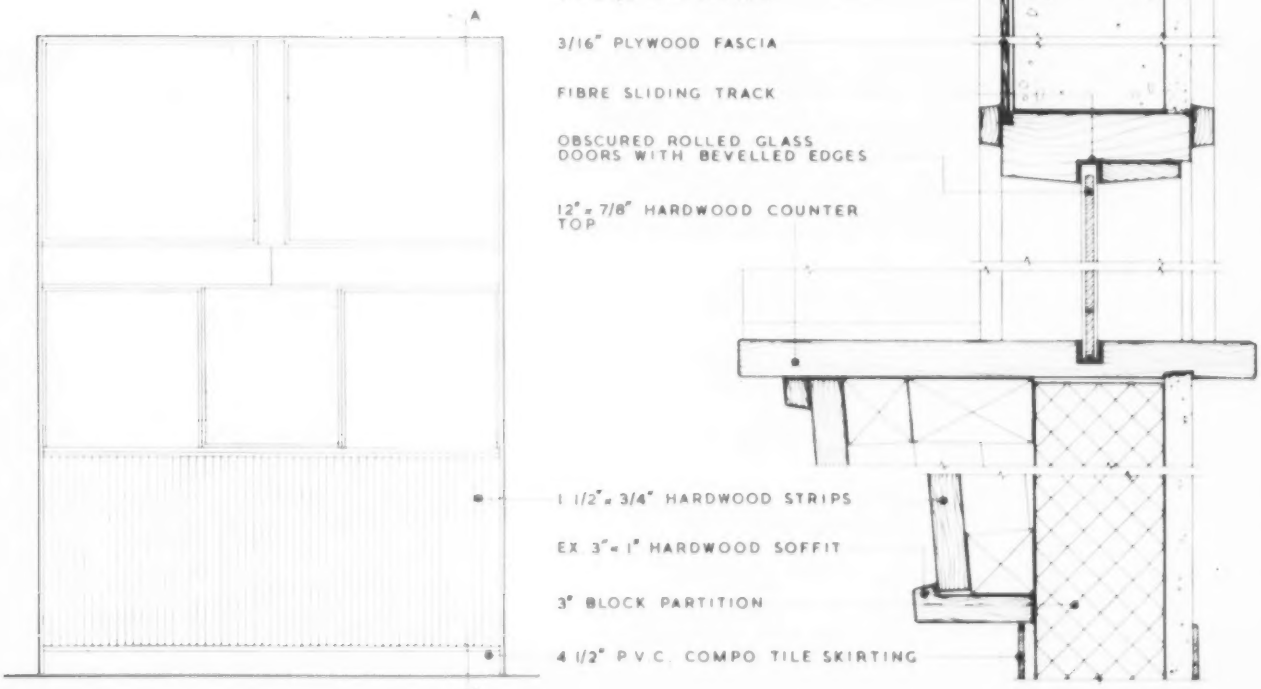


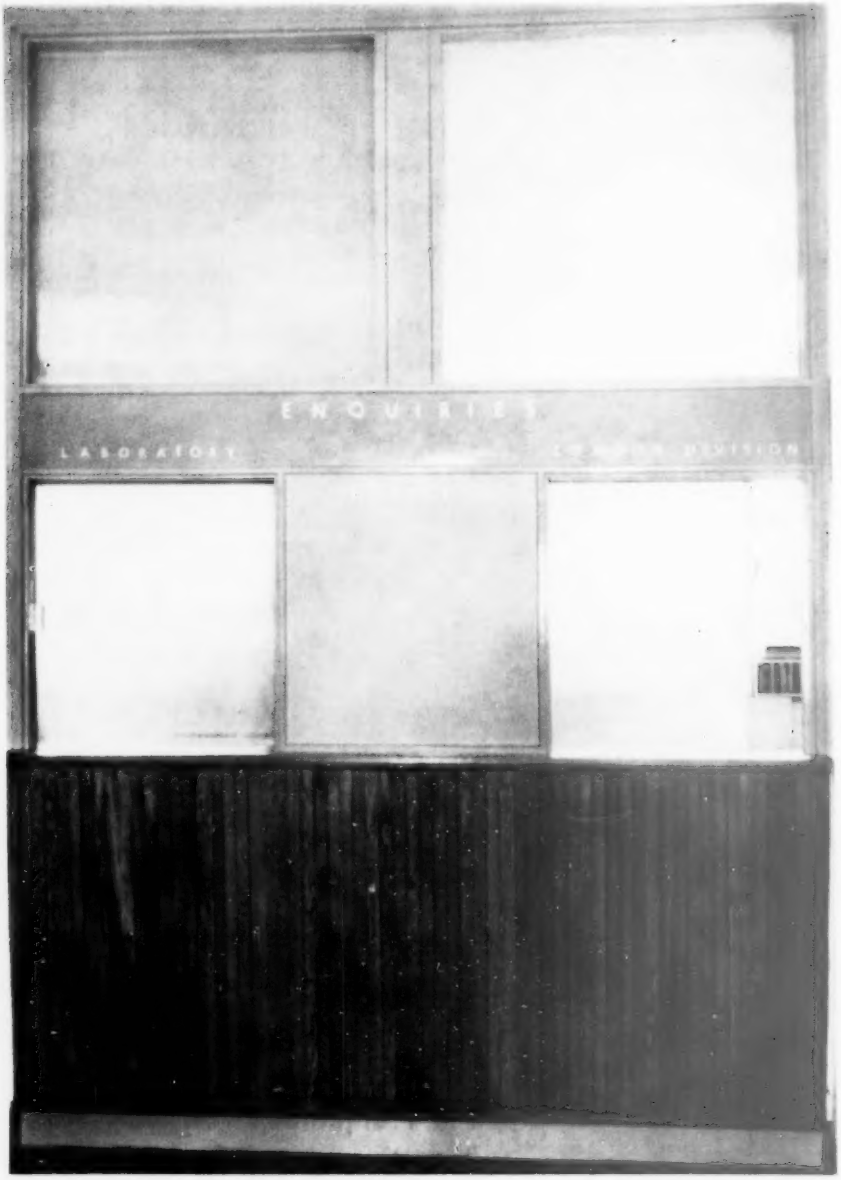
PLAN THROUGH SLIDING HATCH
SCALE : 1/4 FULL SIZE


A
A
7" x 3 1/2" R.C. LINTOL
3/16" PLYWOOD FASCIA
FIBRE SLIDING TRACK
OBSCURED ROLLED GLASS DOORS WITH BEVELLED EDGES
12" x 7/8" HARDWOOD COUNTER TOP
1 1/2" x 3/4" HARDWOOD STRIPS
EX 3" x 1" HARDWOOD SOFFIT
3" BLOCK PARTITION
4 1/2" P.V.C. COMPO TILE SKIRTING

KEY ELEVATION SCALE 3/8" = 1'0"

SECTION A-A SCALE 1/4 FULL SIZE

ENQUIRY HATCHES, LABORATORY AT ORSETT, ESSEX • HAMMETT & NORTON



ENQUIRY HATCHES, LABORATORY AT ORSETT

ARCHITECTS: HAMMETT & NORTON

CONTRACT • NEWS •

Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate: (a) type of work, (b) address for application. Where no town is stated in the address it is the same as the locality given in the heading, (c) deposit, (d) last date for application, (e) last date and time for submission of tenders. Full details of contracts marked ★ are given in the advertisement section.

OPEN

BUILDING

BARROW-IN-FURNESS B.C. (a) 119 houses on the Tummerhill Estate extension. (b) Borough Engineer, Town Hall. (c) 2gns. (e) March 3.

* * *

BLABY R.C. (a) (Contract No. 75) 16 houses, (Contract No. 76) 16, (Contract No. 77) 16 houses at Huncote, (Contract No. 78) 12, (Contract No. 79) 16, (Contract No. 80) 12, (Contract No. 81) 6 houses at Stoney Stanton, (Contract No. 82) 14, (Contract No. 83) 14, (Contract No. 84) 20 houses at Sharnford, (Contract No. 85) 16, and (Contract No. 86) 22 houses at Enderby. (b) Council's Architect, Council Offices, Narborough, Leicester. (c) 2gns. each contract. (e) (Contracts 75 to 84) February 27, (Contracts 85 and 86) March 30.

* * *

BRIGHTON B.C. (a) 62 dwellings at Craven Vale. (b) Borough Engineer, 26-30 King's Road. (c) 2gns. (e) March 4.

* * *

BROMSGROVE U.C. (a) Public convenience at the Produce Market, St. John's Street. (b) Engineer and Surveyor, Council House. (c) 2gns. (e) Feb. 25.

* * *

CARLTON U.C. (a) Scheme No. 71, 84 houses at Burton Road, Gedling (site No. 29). (b) Engineer and Surveyor, Council House, Burton Road. (c) 5gns. (e) February 24.

* * *

CHAPEL-EN-LE-FRITH R.C. (a) 6 houses at Edale, 18 houses and 4 bungalows at Green Lane, Chinley. (b) Messrs. Pendleton and Dickinson, 16, Brazenose Street, Manchester. (c) 2gns. (e) February 28.

* * *

CHORLEYWOOD U.C. (a) 84 houses and 25 garages on the Berry Lane site. (b) L. C. Powell, Norfolk House, Chesham. (c) 2gns. (d) Feb. 20.

* * *

CONGLETON B.C. (a) (Contract No. 5) 4 bungalows at Parson Street Estate, and (Contract No. 20) 7 bungalows on the Bromley Farm Estate. (b) Borough Engineer, Market Place. (c) 2gns. (e) Feb. 23.

* * *

CROYDON B.C. (a) 2-classroom block for the South Norwood Primary School. (b) Chief Education Officer, Katharine Street. (c) £1. (e) Feb. 26.

* * *

DURHAM C.C. (a) (1) Woodwork and metalwork room at Eppleton Modern School; (2) adaptations for practical room and classroom at Cockton Hill County School; (3) classroom and adaptations at Newbottle County School; (4) 2 classrooms at Wingate A. J. Dawson Grammar County School; (5) adaptations for classroom and housecraft room at Highfield County School; (6) housecraft room and classroom at Benfieldside Modern School; (7) 2 classrooms at Leadgate County School; (8) adaptations for practical rooms at Kelloe County School; (9) science laboratory at Blaydon East Modern School; (10) Woodwork and biology rooms at Bishop Auckland King James I Grammar School in M.O.W. hutting. (b) Stating school or schools, to County Architect, Court Lane. (d) Feb. 16.

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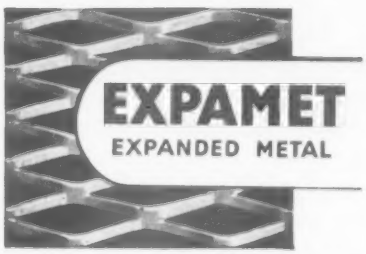

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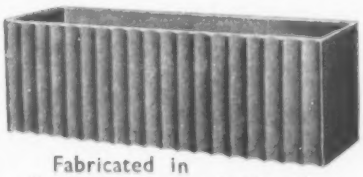
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GLOSSOP B.C. (a) 118 dwellings on the Pyegrove site. (b) John E. Beardshaw and Partner, 186, Oxford Road, Manchester, 13. (c) 5gns. (e) February 27.

* * *

HERNE BAY U.C. (a) 71 houses on the Greenhill Estate. (b) A. S. Wilson and Partners, 8, Storey's Gate, S.W. (c) 2gns. (d) February 16.

* * *

HOWDEN R.C. (a) 50 houses at Scuttlecroft Lane, Howden. (b) Messrs. Blenkinsopp and Thompson, Clifton Chambers, Park Street, Selby. (c) 2gns. (d) February 18. (e) March 5.

* * *

HUDDERSFIELD B.C. (a) 38 houses and 10 bungalows on the Dryclough Estate, Crosland Moor. (b) Borough Architect, High Street Buildings. (c) 2gns. (e) February 27.

* * *

LANCASHIRE C.C. (a) 2 pairs of police houses at Haslingden; alterations for proposed kitchen and dining room at Radcliffe Civic Restaurant; alterations and repairs at Heywood Tower Street Sunday School. (b) County Architect, County Hall, Preston. (e) February 14.

* * *

LEAMINGTON SPA B.C. (a) Public conveniences at Jephson Gardens. (b) Borough Engineer, Town Hall. (c) 2gns.

* * *

LLANDILO U.C. (a) 32 houses adjoining Heol-y-Garreglas. (b) Council's Clerk, Council Offices, 27, Rhosmaen Street. (c) 3gns. (d) February 14.

* * *

LONDON—CAMBERWELL B.C. (a) 234 flats on the Denmark Hill Estate. (b) Director of Housing, Town Hall, Peckham Road, S.E.5. Particulars of recent housing schemes undertaken. (c) 5gns. (e) March 31.

* * *

LONDON—DEPTFORD B.C. (a) 3 houses and 4 flats at Napier Street, S.E.8. (b) Borough Engineer, Town Hall, New Cross, S.E.14. (c) 2gns. (e) February 25.

* * *

LONDON—EAST HAM B.C. (a) (Contract No. 62) Block of 6 flats at Barking Road. (b) Chief Housing Officer, Town Hall. (c) 5gns.

* * *

MACCLESFIELD R.C. (a) 40 houses at Chester Road, Poynton, and 40 houses at Lane Ends, Sutton. (b) H. Chadwick, 19, King Edward Street. (c) 3gns each site. (e) March 2.

* * *

MYNYDDISLWYN U.C. (a) 74 houses on the Llwynon Estate, Oakdale. (b) Engineer and Surveyor, Council Offices, Pontllanfraith, Blackwood, Mon. (c) 3gns. (e) March 2.

* * *

NEWCASTLE-UNDER-LYME R.C. (a) (1) 14 houses at Bignall End; (2) surfacing roads and footpaths at Wood Lane site; (3) surfacing footpaths at Madeley site. (b) A. P. Lovatt, 6, King Street.

* * *

NEWCASTLE-UPON-TYNE C.C. (a) 5 police houses on the Slatyford Lane Estate. (b) City Architect, 18, Cloth Market. (e) March 6.

* * *

N. IRELAND—NORTHERN IRELAND HOSPITALS AUTHORITY. (a) Improvements at Coleraine Hospital. (b) Secretary, Northern Ireland Hospitals Authority, 58, Howard Street, Belfast. (d) February 19.

* * *

NORFOLK C.C. (a) Police wireless station at Brink Hill. (b) County Architect, 27, Thorpe Road, Norwich. (e) March 3.

* * *

NORTHAMPTON R.C. (a) Improvement works to 56 houses at Nether and Upper Heyford. (b) Council's Surveyor, 1, Cheyne Walk. (c) £1. (e) March 25.

* * *

OSWALDTWISTLE U.C. (a) 20 bungalows at Thwaites Road, Whiteash Estate. (b) Engineer and Surveyor, Town Hall. (c) 5gns. (e) February 28.

* * *

PETERBOROUGH C.C. (a) (Group A) 62 houses, (Group B) 20, (Group C) 16, (Group D) 6 and (Group E) 24 houses on the Dogsthorpe North Estate. (b) City Engineer, Town Hall, stating group or groups. (c) 2gns. (d) February 16. (e) March 2.

* * *

POOLE B.C. (a) Stage I of Hillbourne Primary School. (b) Borough Engineer, Municipal Buildings. (c) 2gns. (d) February 18. (e) March 23.

* * *

ROCHDALE B.C. (a) 306 dwellings on the Kirkholt Estate. (b) Borough Surveyor, Town Hall. (c) 5gns. (e) February 28.

* * *

SAFFRON WALDEN B.C. (a) 9 pairs of houses and construction of road and footway on the Peaslands Road site. (b) Borough Engineer, Municipal Offices. (c) 2gns. (e) February 25.

* * *

ST. FAITH'S AND AYLSHAM R.C. (a) (1) 9 bungalows, (2) 12 bungalows and 6 houses, (3) 24 houses at Sprowston. (b) F. M. Dewing, 40, Prince of Wales Road, Norwich. (c) 1gn each group. (e) February 23.

* * *

SCOTLAND—BURGH OF BARRHEAD. (a) 20 houses at Auburn Drive and 8 houses at Bellfield Crescent (separate trades). (b) Messrs. William Baillie and Son, 4, West Regent St., Glasgow, C.2.

* * *

SCOTLAND—EDINBURGH CORPORATION. (a) Maintenance work on Corporation properties (separate trades). (b) City Architect, City Chambers. (e) March 3.

* * *

SCOTLAND—GREENOCK CORPORATION. (a) The Corporation is preparing a list of Contractors for any or all trades, including site servicing works connected with the housing programme. (b) Names (stating trade or trades and size of contract that could be undertaken) to Town Clerk, Municipal Buildings. (d) February 16.

* * *

SCOTLAND—BURGH OF ROTHESAY. (a) 20 flatted houses in 1 block at Russell Street/High Street (all separate trades). (b) Town Clerk, Council Chambers. (d) February 14.

* * *

SCOTLAND—ROXBURGH C.C. (a) Alterations to provide aged persons' accommodation at Heiton Village (separate trades). (b) County Architect, County Offices, Newton St. Boswells. (e) February 24.

* * *

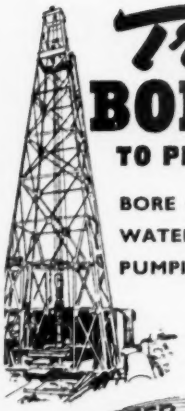
SOUTHPORT B.C. (a) (1) Block of 18 flats, and (2) block of 8 shops and 8 maisonettes at Site 15, Heathfield Road. (b) Borough Architect, 93-105, Lord Street. (c) 2gns each contract. (e) March 9.

* * *

TRURO C.C. (a) Public conveniences at Holywell. (b) A. J. Cornelius, 13, Lemon Street. (c) 1gn. (e) February 24.

* * *

TYNEMOUTH B.C. (a) (Contract No. 1) 37 houses; (Contract No. 2) 34; (Contract No. 3) 26; (Contract No. 4) 25 and (Contract No. 5) 20 houses at Chirton Grange South Estate, North Shields. (b) Borough Surveyor, 16, Northumberland Square, North Shields. (c) 2gns each contract. (e) March 9.



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* * *

WALLASEY B.C. (a) Birket Primary School. (b) Borough Architect, Town Hall. (c) 2gns. (e) March 2.

* * *

WEST RIDING C.C. (a) 2 additional classrooms at Pateley Bridge Secondary School. (b) County Architect, Bishopgarth, Westfield Road, Wakefield. (c) 1gn. (e) February 23.

* * *

WEYMOUTH AND MELCOMBE REGIS B.C. (a) 14 old peoples' bungalows on the Downclose Estate. (b) Borough Engineer, 6, Pulteney Buildings. (c) 2gns. (e) February 27.

* * *

WILLITON R.C. (a) 8 houses at North Croft. (b) Engineer and Surveyor, Council Offices, Fore Street. (c) 2gns. (e) March 2.

* * *

WISBECH AND DISTRICT WATER BOARD. (a) Filter house at the pumping station, Marham. (b) T. F. Parker, 9, The Crescent, Wisbech. (c) £2. (e) February 23.

* * *

WORSLEY U.C. (a) 144 dwellings at Hill Top, Walkden. (b) Council's Clerk, Town Hall, Walkden, Manchester. (c) 2gns. (e) February 28.

* * *

YORK C.C. (a) 2 Blocks of 4 shops with flats above at Askham Lane and Moor Lane Estates. (b) City Architect, 8, St. Leonard's Place. (c) £3. (e) March 7.

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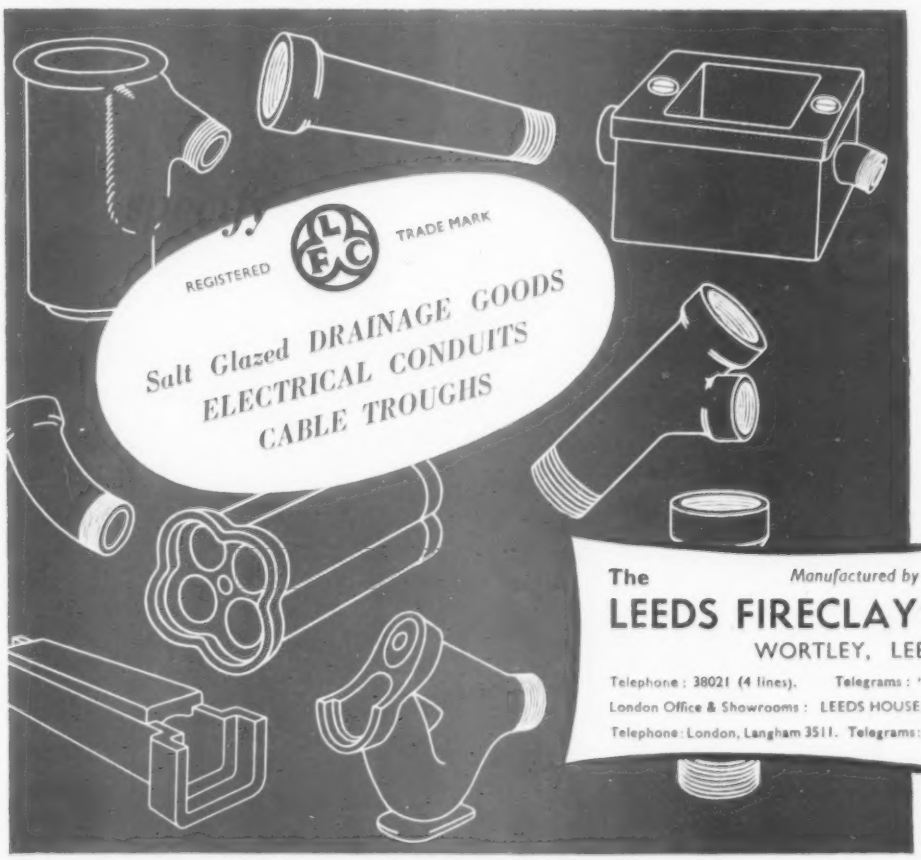

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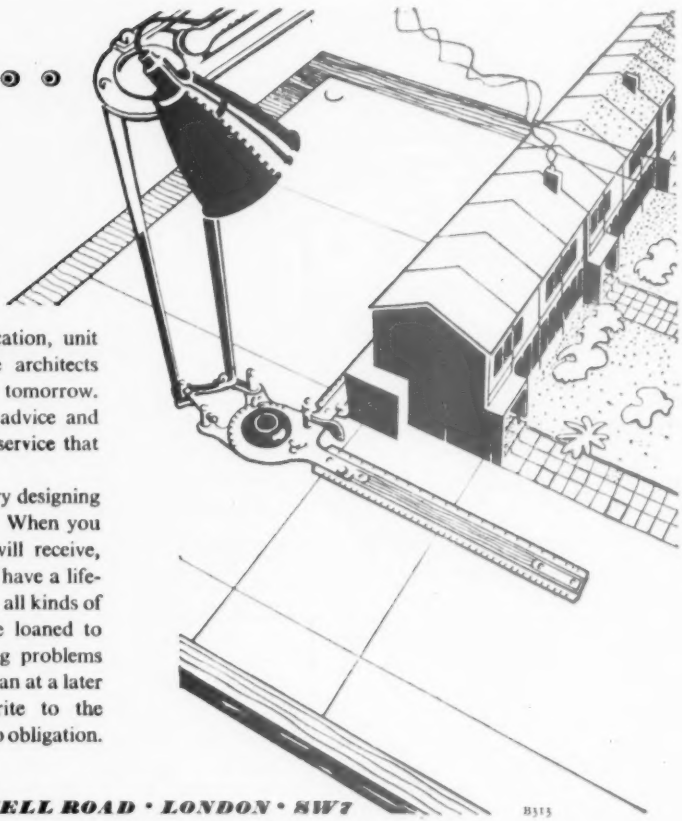

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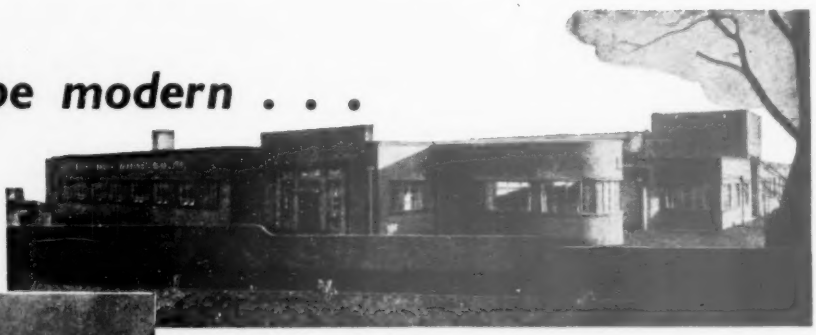

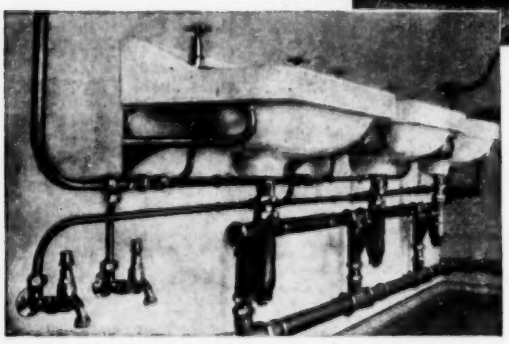

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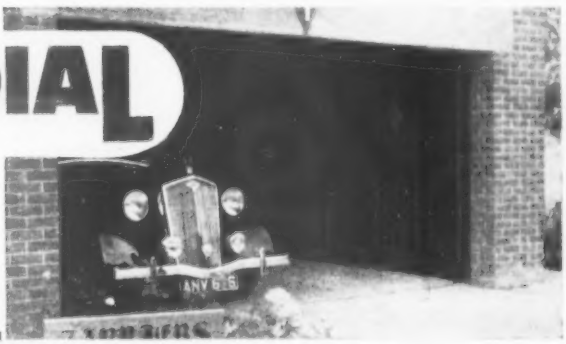

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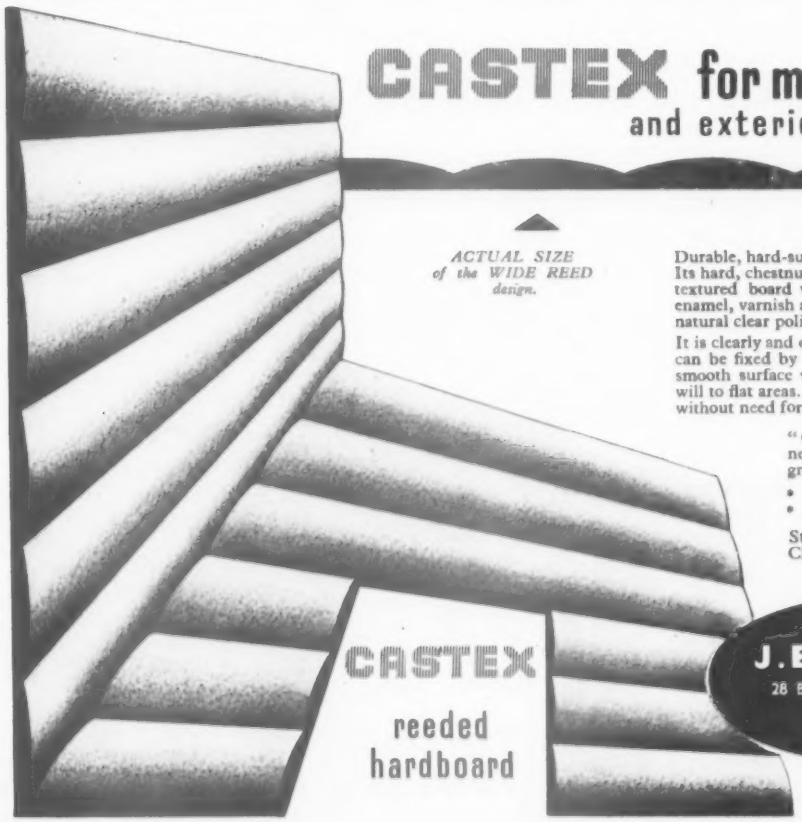

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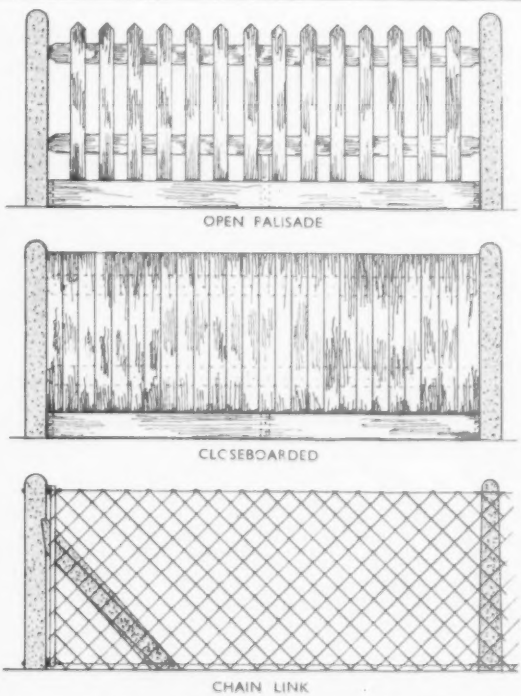

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APPLICATIONS are invited for the following appointment:—
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Applicants must be corporate members of the R.I.B.A. and should have had considerable experience in housing work, including administration of contracts.

The appointment will be superannuable under the Local Government Superannuation Act 1937 and the successful candidate will be required to pass a medical examination.

The Corporation cannot at present offer housing accommodation but in approved cases subsistence allowance may be paid to married men until accommodation has been obtained locally, for a maximum period of six months.

Applications, giving full particulars of the candidate's age, qualifications and experience, together with the names of three persons to whom reference can be made, must reach the General Manager, Bracknell Development Corporation, Farley Hall, Binfield, Bracknell, Berks, on or before the 20th February, 1953, in envelopes marked "Architect Grade III." [6916

APPLICATIONS are invited for the position of ASSISTANT ARCHITECT in the office of the Architect, Eastern Region, British Railways, at King's Cross Station. Applicants should be qualified and have had practical experience. Salary range £612/5 to £687/15 according to qualifications and experience. Free residential railway travelling within specified limits and other reduced rate travelling facilities after qualifying period of service. Permanency to suitable applicants after probationary period. Five-day week and canteen facilities.—Apply in writing giving full particulars as to qualifications, experience, etc., to the Civil Engineer, Eastern Region, British Railways, King's Cross Station, London, N.1. [6922

EXMOUTH URBAN DISTRICT COUNCIL.

APPOINTMENT OF QUANTITY SURVEYING ASSISTANT (CAPITAL WORKS).

APPLICATIONS are invited for the permanent appointment of Quantity Surveying Assistant in the Engineer and Surveyor's Department at a salary in accordance with A.P.T. Grade V of the National Scale of Salaries. The appointment will be subject to the National Scheme of Conditions of Service, the provisions of the Local Government Superannuation Act, 1937, and will be terminable by one month's notice on either side. The selected candidate will be required to pass a medical examination.

Applicants must be Associate Members of the Royal Institution of Chartered Surveyors (Quantity Section) or hold equivalent qualifications, and must have had experience in the preparation of Bills of Quantities, Interim Certificates and the settlement of final accounts.

Applications endorsed "Quantity Surveying Assistant," stating age, qualifications, experience, present and previous appointments held, together with copies of three recent testimonials, must be received by the undersigned not later than Friday, 13th February, 1953.

Applicants must state whether to their knowledge they are related to any member or the holder of any office under the Council.

R. S. RAINFORD,
Clerk and Solicitor.

Council Offices,
EXMOUTH. [6924

APPLICATIONS are invited for the position of ARCHITECTURAL ASSISTANT in the office of the Architect, Eastern Region, British Railways, at King's Cross Station. Applicants should be of Intermediate R.I.B.A. standard. Salary according to age and experience. Free residential railway travelling within specified limits and other reduced rate travelling facilities after qualifying period of service. Permanency to suitable applicants after probationary period. Five-day week and canteen facilities.—Apply in writing giving full particulars as to qualifications, experience, etc., to the Civil Engineer, Eastern Region, British Railways, King's Cross Station, London, N.1. [6923

APPOINTMENTS—contd.

LONDON COUNTY COUNCIL.

ARCHITECT'S DEPARTMENT.

ARCHITECTURAL ASSISTANTS (up to £696) for Historic Buildings Section.

Application form, for return by 2nd March, from Architect, AR/EK/HR/4, County Hall, S.E.1. (108) [6933

LONDON COUNTY COUNCIL.

ARCHITECT'S DEPARTMENT.

ARCHITECT, Grade I (£1,002-£1,143) for Housing Division (two-storey house development and layout). A.R.I.B.A.

Particulars with application form for return by 27th Feb., from Architect, AR/EK/H.I./4, County Hall, S.E.1. (107) [6934

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Bills of Quantities and Form of Tender will be sent to Builders and Contractors making a written application to the Engineer and Surveyor, Council House, Bromsgrove, not later than Wednesday, 25th February, 1953.

The applications should be accompanied by a deposit of £3 3s, which sum will be returned upon the receipt of a bona fide tender, together with all the documents.

The date for receipt of tenders will be sent to the Contractors at the same time as the Bills of Quantities, etc., are issued.

Plans and Specification may be inspected at the offices of the Engineer and Surveyor, Council House, Bromsgrove, or the Quantity Surveyor, R. H. Crump, Esq., Redditch Rd., Holloway, Alvechurch, Worcestershire, during the usual office hours.

Tenders in plain sealed envelopes endorsed "Charford Housing Estate No. 8" must be addressed to the undersigned.

The Council do not bind themselves to accept the lowest or any tender, and any acceptance is subject to the approval of the Ministry of Housing and Local Government.

F. A. JESSOP,
Clerk to the Council.

Council House,
Bromsgrove. [6936

COMPETITIONS

THE UNIVERSITY OF SHEFFIELD ARCHITECTURAL COMPETITION.

THE University of Sheffield invites Architects resident in Great Britain to submit, in competition, designs for certain buildings to be erected on sites within the central area of the University, together with a layout and sketch elevations for other buildings also to be located within that area.

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Last day for submitting designs: 31st October, 1953.

Last day for questions: 14th March, 1953.

Conditions may be obtained on application to: The Secretary, Architectural Competition, The University, Sheffield.

Deposit: £2 which will be returned on receipt of BONA FIDE designs, or return of Competition documents at least four weeks before date of submitting designs. [6913

EDUCATIONAL

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FORTHCOMING EXAMINATIONS.

THE Incorporated Association of Architects and Surveyors will hold examinations at Intermediate and Final grades in the following Sections during the week beginning 8th June, 1953:—

ARCHITECTURAL.
QUANTITY SURVEYORS
BUILDING SURVEYORS (Municipal)
BUILDING SURVEYORS (Non-Municipal)
LAND SURVEYORS

The Final examinations in the above sections have now been sub-divided into two parts and candidates may elect to take one part only.

Direct Final examinations for candidates who are 35 years of age or over, with ten years approved professional employment, will also be held in the Surveying Sections only. A Direct Final examination in two parts will also be held in the Fire Surveyors' Section.

The examinations will be held in London and at selected provincial centres. Applications from candidates for permission to sit, made on the prescribed form, must be received not later than Monday, 16th March, 1953.

Full information on application to the General Secretary, I.A.A.S., 75, Eaton Place, London, S.W.1.

N.B.—It has been found necessary to depart from the usual practice of holding the examinations in May owing to the Whitsun holiday and the Coronation.

Notice is also given that the Association no longer conducts a Preliminary examination. Information as to the requisite standard of education will be supplied on request. [6877

EDINBURGH COLLEGE OF ART.

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SCHOLARSHIPS.

STUDENTS holding the requisite qualifications are invited to make application for Junior Open Scholarships tenable in the Edinburgh College of Art.

The College provides Diploma Courses in Architecture, Design and Crafts, Drawing and Painting and Sculpture, also Courses leading to the Degree of M.A. with Honours in Fine Art and to the Degree of M.A. with Honours in Architecture.

(a) JUNIOR OPEN SCHOLARSHIPS.

Eight Scholarships of £200 per annum for two or more years will be awarded to students who have completed a period of, but not exceeding, two academic years at any recognized full-time Art Institution, or to part-time architects in their third year of study, or to students of Sculpture who have completed two and not exceeding three years of study at any recognized Art Institution.

(b) JUNIOR OPEN (CRAFT) SCHOLARSHIPS.

Two Scholarships of £200 per annum for two years will be awarded to students or apprentices of any of the following categories who have achieved merit in their particular craft to enable them to take a full-time course in that craft at the College:—

(i) Apprentices who have completed their training.

(ii) Students who have specialized in a particular craft in the Evening Classes at the College.

(iii) External students who have specialized in a particular craft or crafts at a recognized Art Institution.

Application forms and further particulars may be obtained from the Secretary, Edinburgh College of Art, Lauriston Place, Edinburgh, 3, to whom completed applications should be returned not later than 20th March, 1953.

J. R. BROWN,
Secretary.
[6929

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TEMPORARY Architectural Assistant with office experience required for preparation of working drawings on housing. 4-6 months work. Salary £8—£10. Please ring Abbey 1173.—Powell and Moya. [6937

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SITUATIONS VACANT

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SENIOR Architectural Surveyor required in the Architect's' Department of Boots Pure Drug Co., Ltd., for liaison work with the Company's Estate Department. The work includes the inspection and measured survey of properties in England, Wales and Scotland with reports upon their structural condition; the preparation of plans for and the reading over of leases, conveyances and other legal documents — dilapidations — levelling — estimating property insurance valuation—negotiations with local authorities, property owners and so on. Good knowledge of building practice and law, and especially of London Building Acts, is essential. Considerable travelling by train is involved from the headquarters in Nottingham.—Reply to The Chief Architect, Boots Pure Drug Co., Ltd., Station St., Nottingham, clearly stating name, age, whether married or single, qualifications, full details of experience and positions held, and salary required, in that order. The post will be permanent and pensionable after a minimum of six months' service. [6932

SITUATIONS VACANT—contd.

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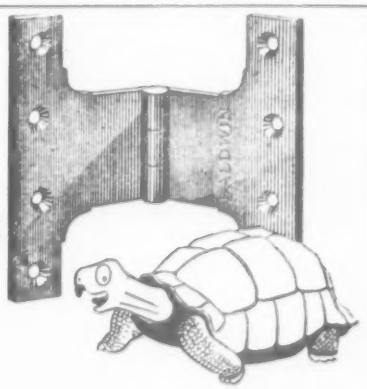

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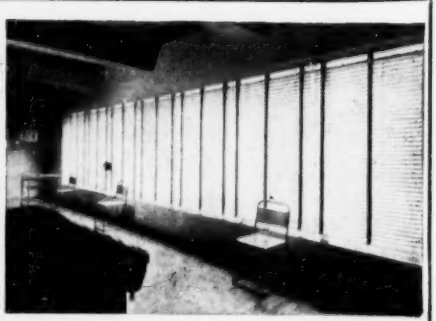

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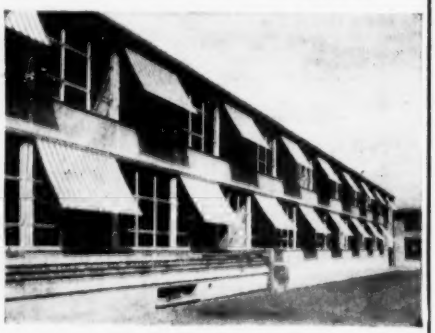

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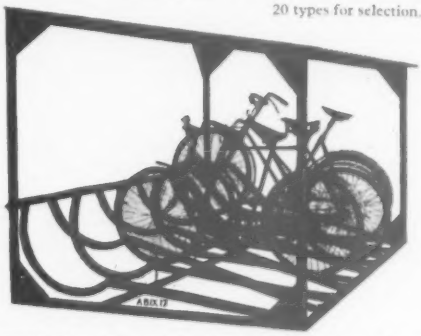

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